
REPRODUCTIVE, MATERNAL, AND CHILD HEALTH IN CENTRAL AMERICA

Trends and Challenges Facing Women and Children

El Salvador • Guatemala • Honduras • Nicaragua

**Division of Reproductive Health
Centers for Disease Control and Prevention (DRH/CDC)
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Implementing Organizations for Surveys:

Country	Year of Survey	Organization
El Salvador:	1988	Asociación Demográfica Salvadoreña
	1993	Asociación Demográfica Salvadoreña
	1998	Asociación Demográfica Salvadoreña
	2002/03	Asociación Demográfica Salvadoreña
Guatemala:	1987	Instituto de Nutrición de Centro América y Panamá
	1995	Instituto Nacional de Estadística
	1998	Instituto Nacional de Estadística
	2002	Ministerio de Salud Pública y Asistencia Social y Universidad del Valle
Honduras:	1987	Ministerio de Salud Pública y Asociación Hondureña de Planificación de Familia
	1991/91	Ministerio de Salud Pública
	1996	Secretaría de Salud y Asociación Hondureña de Planificación de Familia
	2001	Asociación Hondureña de Planificación de Familia y Secretaría de Salud
Nicaragua:	1992/93	Asociación Pro-Bienestar de la Familia Nicaragüense
	1997	Instituto Nacional de Estadísticas y Censos y Ministerio de Salud
	2001	Instituto Nacional de Estadísticas y Censos y Ministerio de Salud

Preface

It is our pleasure and privilege on behalf of the Latin America and Caribbean (LAC) Bureau and the Central American and Mexico (CAM) Social Sector Component of the United States Agency for International Development (USAID), to write the preface to the most comprehensive compilation of data regarding women's and children's health in the Central American Region. Recognizing the wealth of social sector data available from the Demographic and Health Survey (DHS) and Reproductive Health Survey (RHS) programs, health and education office directors in the CAM region consisting of El Salvador, Guatemala, Honduras and Nicaragua wanted to compare and contrast trends in key maternal and child health indicators in order to identify needs and potential synergies. The LAC Bureaus' Health Program joined the effort to help ensure that such information would aid the design and refinement of health programs and identify areas where these countries might work together more closely.

Great strides have been made in improving reproductive and child health in these countries during the last 10 years. In all of these countries, USAID has been the major donor in the health sector and can be proud of being a partner to these achievements. Still, disparities exist between rural and urban areas in all countries and between the income levels in each country. Often the reader will see similarities between achievements of El Salvador and Nicaragua compared to those of Guatemala and Honduras. Much is yet to be done in each country to achieve the health statistics of its neighboring country, Costa Rica, which has a similar culture and history, but overall better social and economic levels and health outcomes.

The RHS and DHS population-based survey programs have become the gold standard for health sector planners and decision makers in USAID Missions, as well as for host country governmental and non-governmental organizations and donor agencies such as UNFPA, PAHO, and UNICEF, the World Bank, and the Inter American Development Bank. This report provides insight on health behaviors, knowledge of HIV/AIDS, infant and child mortality and reproductive health. Regional trend data are easily available and usable for those seeking a regional approach to similar complex health problems, thus trying to maximize the impact of scarce health resources.

We wish to express our gratitude to the member countries and LAC that so generously helped with the resources and review of the report. Special thanks go to Dr. Mary Ann Anderson of USAID/Guatemala for her leadership in initiating this important work together with Kelly Saldaña of the USAID/LAC Health Team. Throughout the process, Dr. Paul Stupp, Dr. Steve McCracken and Mr. Richard Monteith of the Centers for Disease Control and Prevention as colleagues and professionals have been unwavering in their commitment to prepare a technically sound and helpful reference document for the development and improvement of women and children's health programs. To all of you, we appreciate your contributions.

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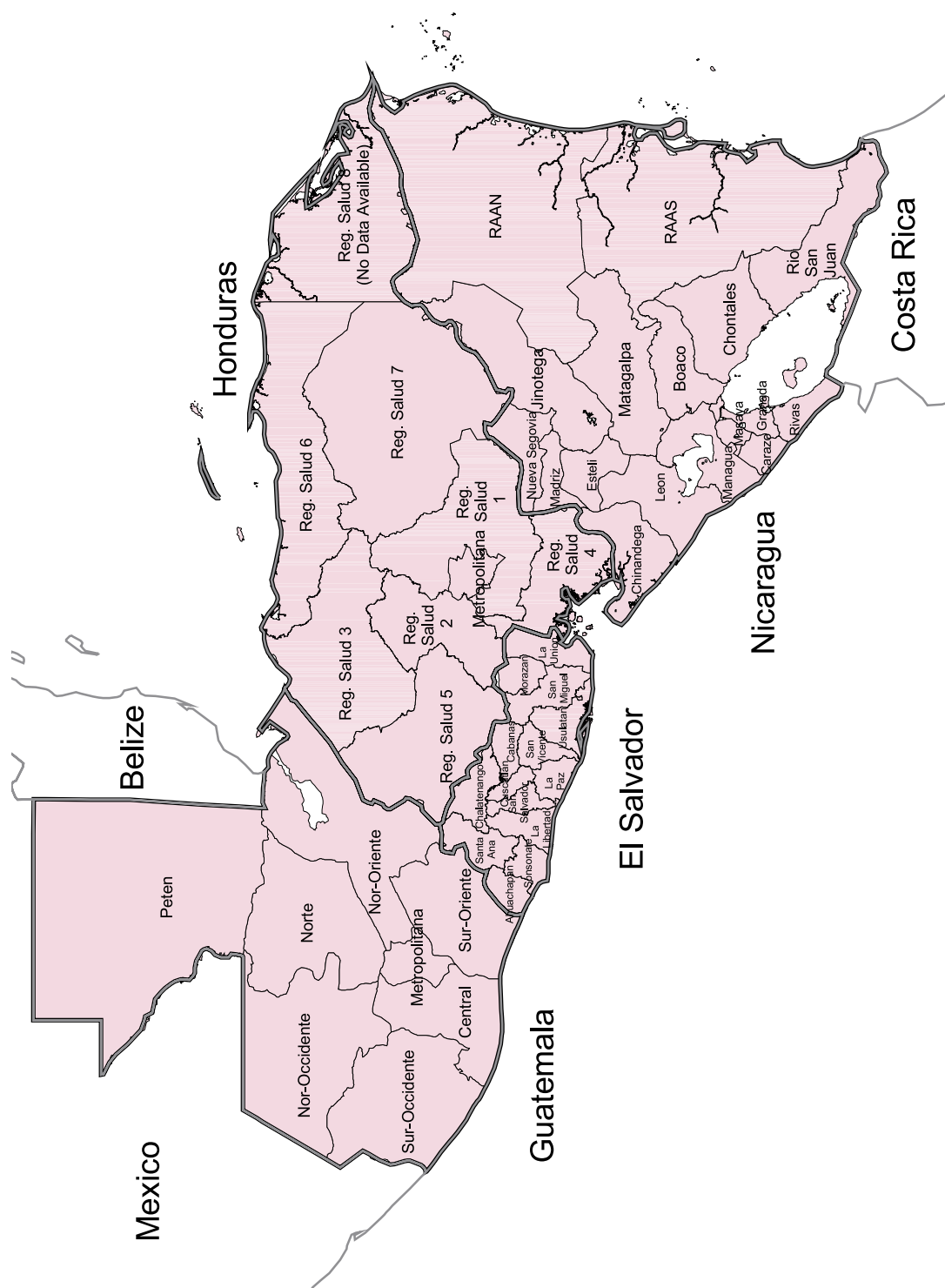
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Key to the Regions and Departments Used for the Maps Shown in this Report



CHAPTER 1

Introduction

Since the 1970s, 22 surveys of women (some also including men) have been conducted in El Salvador, Guatemala, Honduras, and Nicaragua. The majority of these surveys have been conducted as part of the Reproductive Health Surveys (RHS) program which are implemented with technical assistance from the Division of Reproductive Health, Centers for Disease Control and Prevention (CDC) or as part of the Demographic and Health Surveys (DHS) program with technical assistance provided by ORC/Macro. These surveys primarily report on fertility, contraceptive use, infant mortality, use of maternal and child health services, and the nutritional status of children and their mothers. In recent years, the scope of the surveys has broadened by including modules on HIV/AIDS, violence, and educational status of children, just to mention a few. In general, the survey findings are used to evaluate maternal and child health and family planning programs, to aid in the design of new programs and the restructuring of ongoing programs, and to provide baseline data to guide and evaluate new initiatives.

This comparative study describes the similarities and differences between El Salvador, Guatemala, Honduras, and Nicaragua, and to a limited extent, highlights subgroups with specific needs, in order to provide information for policy formulation at the regional and country levels.

The data presented in this study primarily come from the last three surveys conducted in each country since the early 1990s, although some tables contain data from surveys conducted in the late 1980s. While men were interviewed in some of the surveys, this report primarily focuses on the information provided by female respondents.

Until now, a comparison of key health indicators had never been compiled for the Central American region. It is intended that this comparative analysis, although limited to the aforementioned countries, serve as a reference document for readers interested in major health findings in these countries, while more detailed information may be found in the individual country reports (see references).

Background

This report sets forth comparative health data collected in face-to-face interviews from representative household samples of women of reproductive age in El Salvador, Guatemala, Honduras, and Nicaragua. Demographically and socially, the countries included in this report have much in common. Women tend to marry early, have their first child shortly after they marry, and achieve the desired family size in their mid- to late 20s. For many women, the only “career path” that they have is to marry, have children, and raise them. Traditionally, the educational level of the women has been low in these countries, especially among rural women, but there are indications from the survey data that more and more women are achieving higher levels of education. The relationship between education and the use of health services and the adoption of appropriate health behaviors conforms to expectations. For example, the use of key maternal and child health services increases steadily with increasing levels of education in all of the countries. Other socioeconomic factors also influence whether a woman uses a particular health service. As expected, urban women are more likely than rural women to use a particular health service in every country surveyed. Similarly, women classified as coming from higher socioeconomic households tend to use the health services in their respective countries at a higher rate than

women from lower socioeconomic households.

In all of the countries, the principal provider of health services is the Ministry of Health, followed by the Social Security Institute, except in Nicaragua where the Social Security Institute is essentially a health insurance agency and, thus, does not provide direct health services. The Social Security Institute in each country is primarily urban based, and provides the bulk of its services in the capital city. Private clinics and hospitals have a minor role in providing health services. During the 1980s and early in the 1990s, the private family planning association in each country played a major role in the provision of family planning services, but since the mid-1990s their relative participation has diminished as they work toward becoming self-sustaining.

Surveys and Measurement Issues

The analyses in this report are based primarily on data collected in the last three surveys conducted in each country, although some tables include survey data from the late 1980s. For the most part, the questions asked in the surveys in each country are similar and, thus, are comparable, but some are not, and this is highlighted in the footnotes of the tables. The denominator used to analyze a particular variable sometimes varies from country to country. These differences exist particularly with respect to the family planning data, and are also highlighted in the footnotes of the tables.

Another measurement issue is that questions asked in the RHS surveys are not necessarily asked in the DHS surveys, and vice versa, thus, data are lacking in some tables of this report for some countries, and this is denoted by the letters ‘na’ (not available).

It should be emphasized that all results presented in the tables of this report are weighted to adjust for sampling design and non-response differentials, if necessary. In order to facilitate the reading of the tables, the unweighted and the weighted number of observations is not shown. An asterisk (*) is used to denote that there are less than 25 cases for a given cell.

Table 1.1 lists the surveys analyzed in this report. For each survey, the table shows the year in which the fieldwork was conducted, which organization provided technical assistance to the survey, number of women actually interviewed, and the number of live births in the 5 year period prior to interview.

All of the surveys shown for El Salvador were conducted with the technical assistance of the Division of Reproductive Health, Centers for Disease Control and Prevention (CDC). The 1987, 1995, and the 1998/99 surveys in Guatemala

were conducted with the technical assistance of Macro International, Inc., while the 2002 survey was conducted with the technical assistance of CDC. The 1987 and 1991/92 Honduran surveys were conducted with the technical assistance of Family Health International (FHI) and Management Sciences for Health (MSH), while the 1996 and 2001 surveys were conducted with the technical assistance of CDC and MSH. The 1992/93 survey in Nicaragua was conducted with the technical assistance of CDC, and the 1998 and 2001 surveys were done with the assistance of Macro International, Inc.

1.1 Characteristics of the Surveys					
Country	Year of Survey	Technical Assistance	Number of Women Aged 15–49	Number of Married Women Aged 15–49	Number of Live Births
El Salvador	1988	CDC	3,579*	2,276*	1,486†
El Salvador	1993	CDC	6,207	3,956	4,286
El Salvador	1998	CDC	12,634	8,085	8,488
El Salvador	2002/03	CDC	10,689	6,777	5,868
Guatemala	1987	Macro	5,160*	3,377*	4,581
Guatemala	1995	Macro	12,403	7,984	9,150
Guatemala	1998/99	Macro	6,021	3,964	4,545
Guatemala	2002	CDC	9,155	6,636	7,915
Honduras	1987	FHI, MSH	10,143*	6,093*	5,624
Honduras	1991/92	FHI, MSH	7,521*	4,323*	3,946
Honduras	1996	CDC, MSH	7,505	4,693	6,328
Honduras	2001	CDC, MSH	8,362	5,742	6,624
Nicaragua	1992/93	CDC	7,150	4,875	5,469
Nicaragua	1998	Macro	13,634	8,045	7,992
Nicaragua	2001	Macro	13,060	7,424	6,526
* Women aged 15–44.					
† Last births only					

CHAPTER 2

Characteristics of Households and Women

Characteristics of Households

The availability of basic services such as piped water, electricity, and sanitation are indicators of the standard of living of a family and their risk of contracting disease. This section of the report discusses some of the services available to households, according to the last survey conducted in each country, and trends in the percentage of households that possess them.

Tables 2.1 and 2.3 show trends in the percentage of households in each country that possess selected services and goods related to the health of the population, while Tables 2.2 and 2.4 show rural/urban differentials for these same services and goods, according to the most recent survey in each country. Focusing on the last survey conducted in each country, almost 3 out of every 4 households in Honduras have piped water inside the house or on the property compared to 6 out of every 10 households in El Salvador and Nicaragua, and almost 5 out of every 10 households in Guatemala. In El Salvador and

Guatemala, approximately 90 percent of the households have a flush toilet or latrine, while in Honduras and Nicaragua approximately 80 percent of the household have these services. The percentage of households which adequately dispose their garbage ranges from a low of 64.9 percent in Guatemala to a high of 84.2 percent in El Salvador. With respect to the energy used to cook food, 2 out of every 3 households in El Salvador use propane gas or electricity for cooking, while less than 40 percent of the households in Guatemala, Honduras, and Nicaragua use these energy sources.

Table 2.1
Trends in the Availability of Basic Services in the Household that are Related to Health

Country	Year of Survey	Faucet in House or on Property	Flush Toilet or Latrine	Adequate Disposal of Garbage*	Cooks with Gas or Electricity	Dirt Floor
El Salvador	1993	49.0	85.8	na	48.1	35.6
El Salvador	1998	59.9	88.4	74.6	59.4	31.5
El Salvador	2002/03	63.4	90.5	84.2	66.6	26.8
Guatemala	1995	49.4	82.9	na	na	49.5
Guatemala	1998/99	54.7	79.9	na	na	38.3
Guatemala	2002	46.6	87.6	64.9	32.5	35.9
Honduras	1991/92	65.7	63.0	68.6	na	46.9
Honduras	1996	69.2	73.8	68.0	20.4	40.6
Honduras	2001	74.3	78.0	74.8	31.1	32.1
Nicaragua	1992/93	58.8	79.6	na	26.8	na
Nicaragua	1998	64.1	83.2	na	na	44.3
Nicaragua	2001	63.1	79.1	80.0	39.9	43.4

* Consists of municipal and private garbage collection, and the burning and burying of garbage.

na: Not available.

Still focusing on the last survey conducted in each country, it can be seen at a glance that in all four countries the rural population is less likely than the urban population to have access to the services presented in Table 2.2. For example, in Nicaragua, while 87.1 percent of urban households have piped water, only 27.6 percent of rural households do, for a 60 percentage point difference. The urban/rural differentials vary by service: the largest urban/rural differential with regards to piped water is found in Nicaragua; the

largest differential with regards to flush toilets and latrines and the adequate disposal of garbage is found in Honduras; and the largest differential with regards to cooking with propane gas or electricity is found in Nicaragua. Comparing rural areas across countries, Honduras stands out as having the highest percentage of rural households with piped water (60.5 percent) and El Salvador as having the highest percentage of rural households with adequate garbage disposal (73.8 percent).

Table 2.2
Availability of Basic Services in the Household that are Related to Health, According to Area of Residence (Most Recent Survey)

Country/Area	Year of Survey	Faucet in House or on Property	Flush Toilet or Latrine	Adequate Disposal of Garbage*	Cooks with Gas or Electricity	Dirt Floor
El Salvador	2002/03					
Total		63.4	90.5	84.2	66.6	26.8
Urban		83.0	97.6	92.1	89.4	10.7
Rural		37.8	81.2	73.8	36.8	47.9
Guatemala	2002					
Total		46.6	87.6	64.9	32.5	35.9
Urban		49.8	95.7	81.6	55.4	17.0
Rural		44.2	81.3	52.0	14.7	50.5
Honduras	2001					
Total		74.3	78.0	74.8	31.1	32.1
Urban		89.0	94.7	90.8	53.5	11.2
Rural		60.5	62.1	59.6	9.9	51.8
Nicaragua	2001					
Total		63.1	79.1	80.0	39.9	43.4
Urban		87.1	87.5	88.7	61.8	27.8
Rural		27.6	66.8	67.1	7.7	66.5

* Consists of municipal and private garbage collection, and the burning and burying of garbage.

Table 2.3
Trends in the Availability of Goods and Services in the Household

Country	Year of Survey	Electricity	Radio	Television	Refrigerator	Telephone	Car or Truck	Computer
El Salvador	1993	75.8	na	64.5	39.8	11.5	12.4	na
El Salvador	1998	80.3	na	74.5	50.7	23.4	18.2	na
El Salvador	2002/03	86.9	na	80.9	54.9	46.0	17.4	na
Guatemala	1995	60.8	78.6	50.4	26.8	11.2	14.6	na
Guatemala	1998/99	70.9	79.5	55.6	30.6	15.6	16.7	na
Guatemala	2002	81.6	85.7	63.9	37.5	34.0	21.1	8.1
Honduras	1991/92	47.0	65.2	36.3	23.5	na	na	na
Honduras	1996	53.4	73.9	44.0	27.7	10.3	10.6	na
Honduras	2001	60.6	85.2	53.4	35.4	16.6	14.5	3.1
Nicaragua	1992/93	66.4	76.6	52.4	22.6	6.1	9.2	na
Nicaragua	1998	70.3	78.4	55.5	23.3	10.6	9.2	na
Nicaragua	2001	72.6	81.0	59.4	25.7	12.4	10.0	3.1

na: Not available.

Table 2.4
Availability of Goods and Services in the Household,
According to Area of Residence

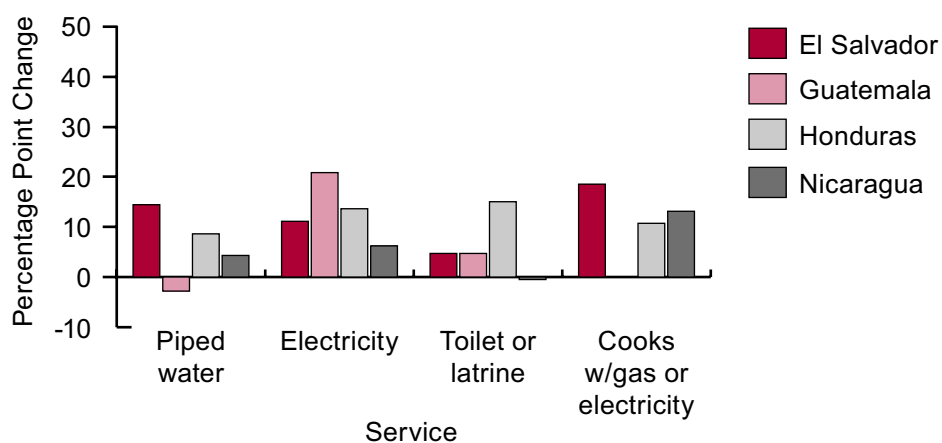
Country/ Area	Year of Survey	Electricity	Radio	Television	Refrigerator	Telephone	Car or Truck	Computer
El Salvador	2002/03							
Total		86.9	na	80.9	54.9	46.0	17.4	na
Urban		96.3	na	91.8	70.8	61.2	23.8	na
Rural		74.6	na	66.6	34.1	26.0	9.0	na
Guatemala	2002							
Total		81.6	85.7	63.9	37.5	34.0	21.1	8.1
Urban		94.6	91.6	83.6	57.8	53.8	32.1	14.6
Rural		71.5	81.2	48.6	21.8	18.6	12.6	3.1
Honduras	2001							
Total		60.6	85.2	53.4	35.4	16.6	14.5	3.1
Urban		91.2	88.6	79.7	56.1	32.4	22.5	6.0
Rural		31.8	81.9	28.6	15.9	1.8	6.8	0.3
Nicaragua	2001							
Total		72.6	81.0	59.4	25.7	12.4	10.0	3.1
Urban		94.5	85.4	80.2	37.8	20.2	14.4	5.0
Rural		40.1	74.4	28.6	7.6	1.0	3.5	0.3
na: Not available.								

With regard to other household amenities related to health and communication, the data in Table 2.3 indicate that over 80 percent of households in El Salvador and Guatemala have electricity, compared to 72.6 and 60.6 percent of households in Nicaragua and Honduras. In Guatemala, Honduras, and Nicaragua, over 80 percent of the households have a radio, while the percentage of households in all four countries that have television ranges from a low of 53.4 percent in Honduras to a high of 80.9 percent in El Salvador. The likelihood of possessing a refrigerator is greatest in El Salvador (54.9 percent) and lowest in Nicaragua (25.7 percent). In all of the countries, the probability of having a telephone in the household or of owning a vehicle is relatively low. Similarly, very few households have a computer.

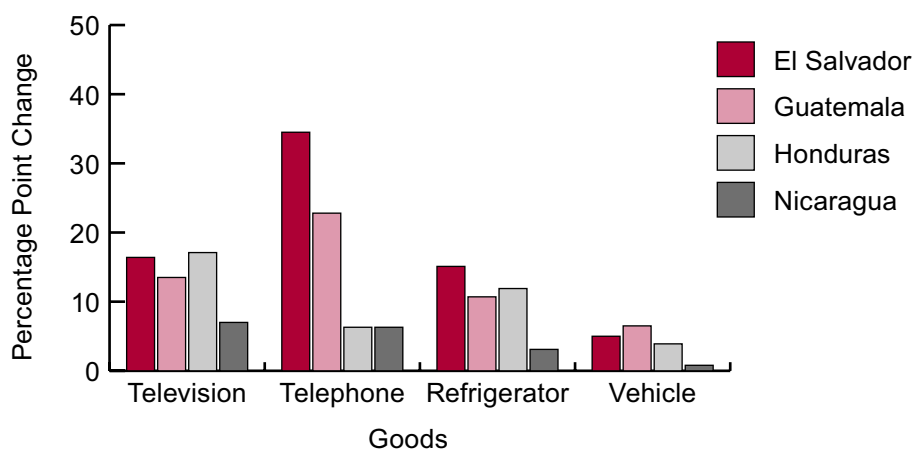
Graphs 2.1 and 2.2 highlight trends in the possession of selected goods and services between the early 1990s and the most recent survey conducted since 2000. With few exceptions, there has been a general increase in the availability of these services in each country. The most notable increase is of the telephone, likely due to increased availability of cell phone services. El Salvador witnessed a 35 percentage point increase between 1993 and 2003.

Nicaragua has the lowest percentage of households with TVs (televisions), telephones, refrigerators and automobiles. It also had the smallest percentage point increase in possession of these three goods between the first survey and the most recent survey.

Graph 2.1
Change Between Early 1990s and Early 2000s in Percent of
Households With Piped Water, Electricity, Flush Toilet or Latrine
and That Cook With Gas or Electricity (First and Third Surveys)

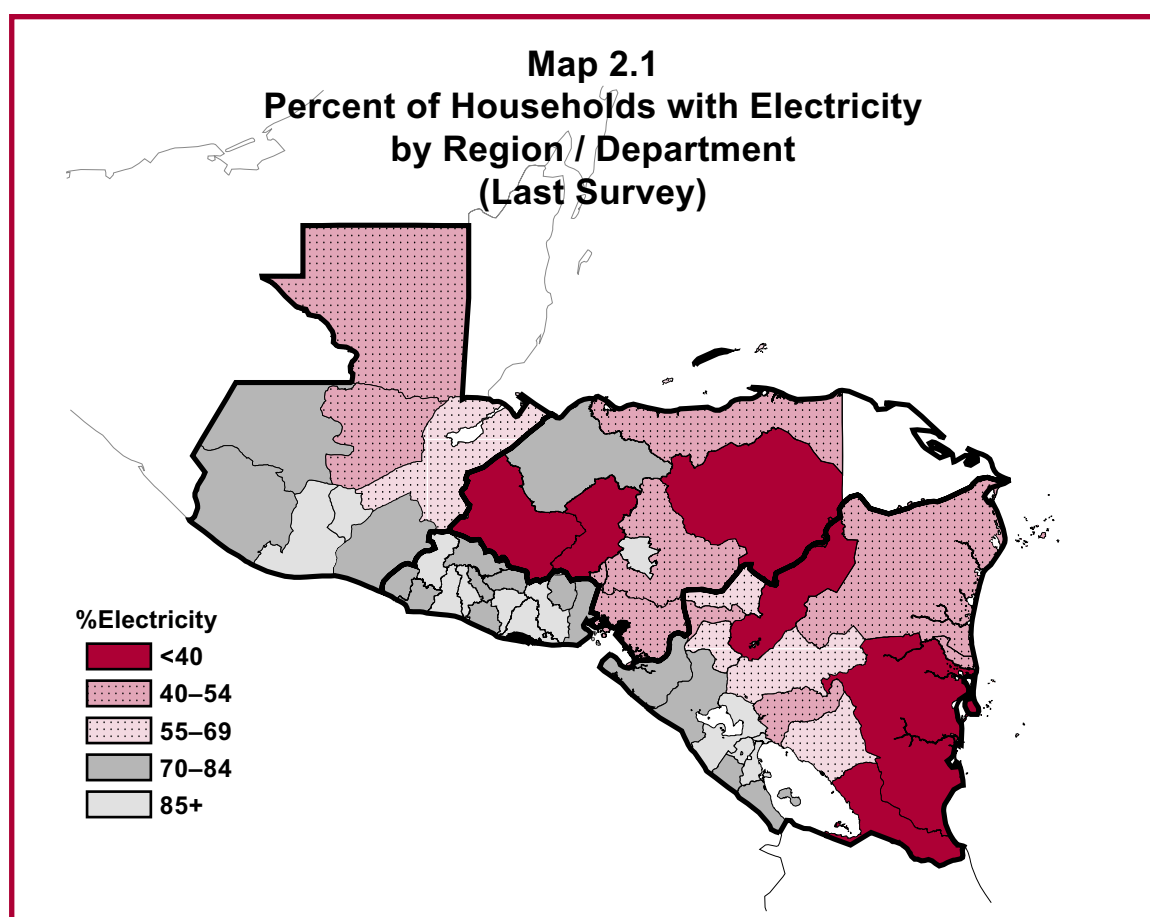


Graph 2.2
Change Between Early 1990s and Early 2000s in Percent of
Households With Television, Telephone, Refrigerator and Automobile
(First and Third Surveys)

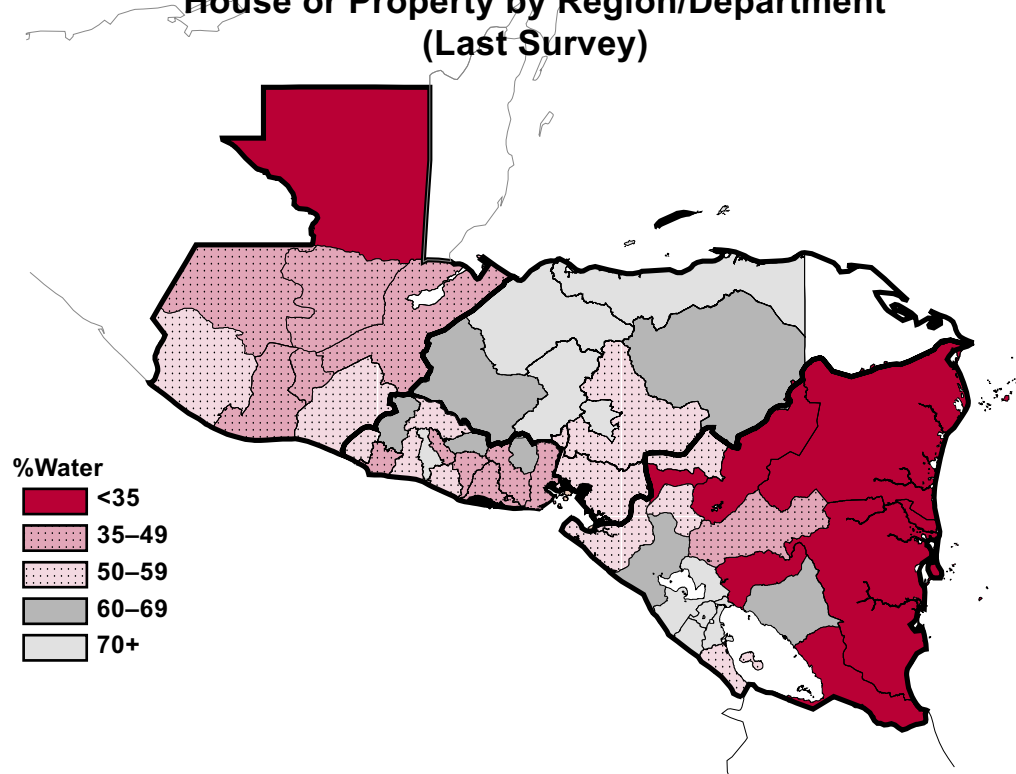


Maps 2.1, 2.2 and 2.3 illustrate subnational variations in the percentage of households with electricity, piped water and a refrigerator, according to the most recent survey in each country. It is notable that electrification is most advanced (70 percent or more of households) along the Pacific coasts of Guatemala and Nicaragua and in all departments of El Salvador. Honduras stands out as having the broadest

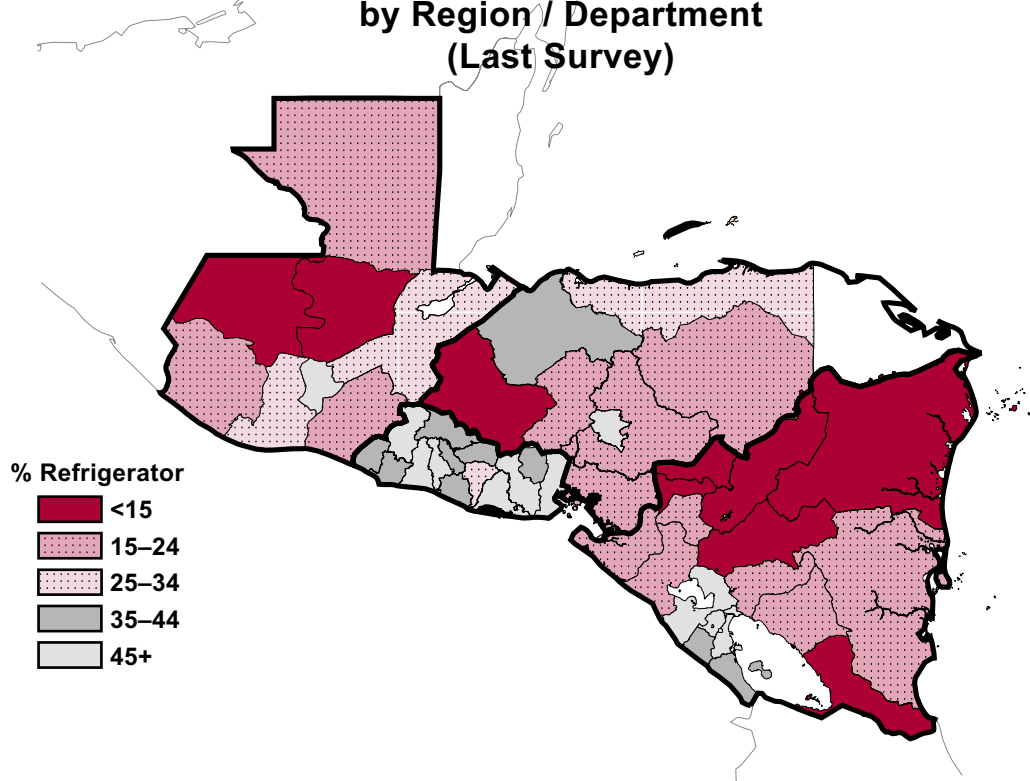
coverage of households with piped water (more than 60 percent of households in all but one of its health regions). Possession of a refrigerator is fairly widespread throughout El Salvador, but in Guatemala, Honduras and Nicaragua it is common only in the regions (or departments) containing Guatemala City, San Pedro Sula, Tegucigalpa and Managua.



Map 2.2
Percent of Households with a Water Faucet in
House or Property by Region/Department
(Last Survey)



Map 2.3
Percent of Households with a Refrigerator
by Region / Department
(Last Survey)



Characteristics of Reproductive Age Women

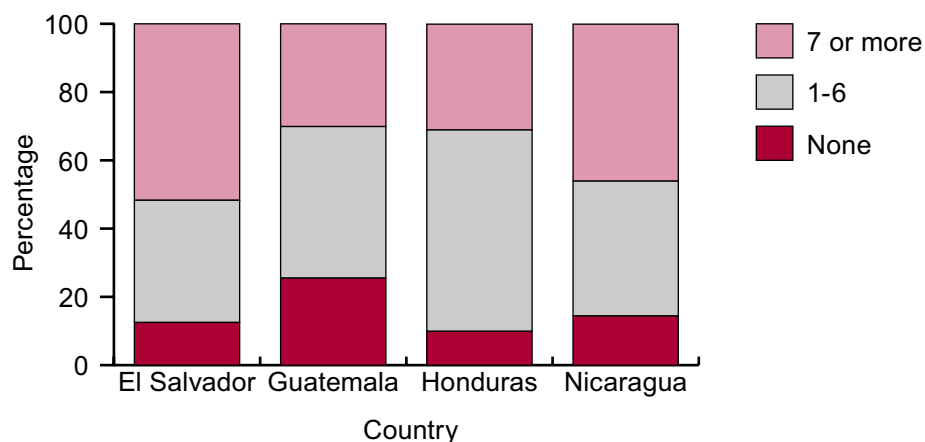
As a result of numerous education reforms in these countries, levels of education have different meanings at different ages in each country. To simplify the presentation, years of schooling have been calculated and regrouped into the following three categories: none or less than 1 year; primary including 1 through 6 years of schooling, and secondary having 7 years or more of schooling. Table 2.5 presents trends

in the percent distribution of reproductive age women by education level in the last three surveys conducted in each country. Table 2.6 shows differentials by area of residence for the most recent survey in each country. By focusing on the lowest and highest educational level presented in Table 2.5, one can generalize that the proportion of respondents with no schooling has decreased since the early 1990s, while the

Table 2.5
Trends in The Educational Level of Women Who Have Been
Interviewed, Women Aged 15–49

Country	Year of Survey	None	1–6	7 or more
El Salvador	1993	18.5	43.0	38.6
El Salvador	1998	15.5	40.3	44.2
El Salvador	2002/03	12.5	35.8	51.7
Guatemala	1995	28.3	47.2	24.5
Guatemala	1998/99	25.3	49.3	25.4
Guatemala	2002	25.5	44.4	30.1
Honduras	1991/92	15.2	59.9	24.9
Honduras	1996	12.4	61.0	26.7
Honduras	2001	9.9	59.0	31.0
Nicaragua	1992/93	16.1	45.6	38.3
Nicaragua	1998	15.5	40.4	44.0
Nicaragua	2001	14.4	39.5	46.0

Graph 2.3
Percentage of Women, 15 to 49, by Highest Grade Level Completed
(Most Recent Survey)



proportion of respondents with at least some secondary education (grades 7 or higher) has gradually increased. Comparing the countries (Graph 2.3), in both El Salvador and Nicaragua almost half of women have at least 7 years of education. In both Honduras and Guatemala

only about 30 percent of women had any secondary education and in Guatemala 25.5 percent of women report no formal education at all. Given the importance of education for many reproductive health indicators it will be helpful to keep the education differential in mind when comparing these four countries.

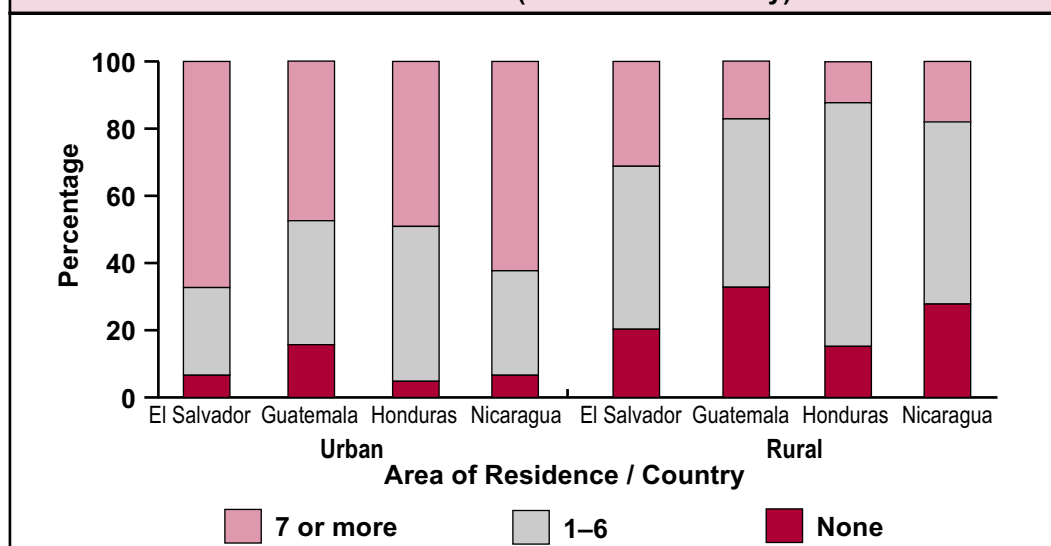
Table 2.6 and Graph 2.4 show rural/urban differentials in education for the four countries. Focusing on the percent with at least some secondary education, it can be seen that the urban areas have a considerable advantage over rural areas in all four countries. The urban/rural differentials range between 30 percentage points in Guatemala and 45 percentage points in Nicaragua. Within urban areas there are also

notable differences between the four countries. While in El Salvador and Nicaragua, 67.3 and 62.3 percent of urban women have at least some secondary education, in Guatemala and Honduras only 47.5 and 49.1 percent of urban women have some secondary education. The overall differential between countries in education level is therefore not explained by inter-country differences in the level of urbanization.

Table 2.6
Educational Level of Women Who Have Been
Interviewed, According to Area of Residence, Women Aged 15–49

Country/Area	Year of Survey	None	1–6	7 or more
El Salvador	2002/03			
Total		12.5	35.8	51.7
Urban		6.6	26.1	67.3
Rural		20.3	48.5	31.2
Guatemala	2002			
Total		25.5	44.4	30.1
Urban		15.7	36.9	47.5
Rural		32.8	50.1	17.2
Honduras	2001			
Total		9.9	59.0	31.0
Urban		4.8	46.1	49.1
Rural		15.2	72.5	12.2
Nicaragua	2001			
Total		14.4	39.5	46.0
Urban		6.6	31.1	62.3
Rural		27.8	54.2	18.0

Graph 2.4
Percentage of Women, 15 To 49, By Highest Grade Level Completed and
Area of Residence (Most Recent Survey)



Graph 2.5 depicts, for the most recent survey, the percent of reproductive age women living in urban areas and the percent of live births in the five years before the survey occurring to urban women. There is a considerable range of more than 20 percentage points in the “percent urban” among the four countries. Nicaragua has the highest percent urban of the countries with 63.1 percent of women living in urban areas, followed by El Salvador (56.7 percent), Honduras (51.1 percent) and Guatemala (42.5 percent). For all four countries the percentage of

births occurring to urban women is considerably less than the percentage of women who are urban. This reflects the differences in fertility between urban and rural areas, which will be discussed in Chapter 3. Some of the indicators for maternal and child health presented in the report are based on births in the five years before the survey, so it is important to keep in mind that these indicators may be more strongly affected by area of residence than are indicators based on women.

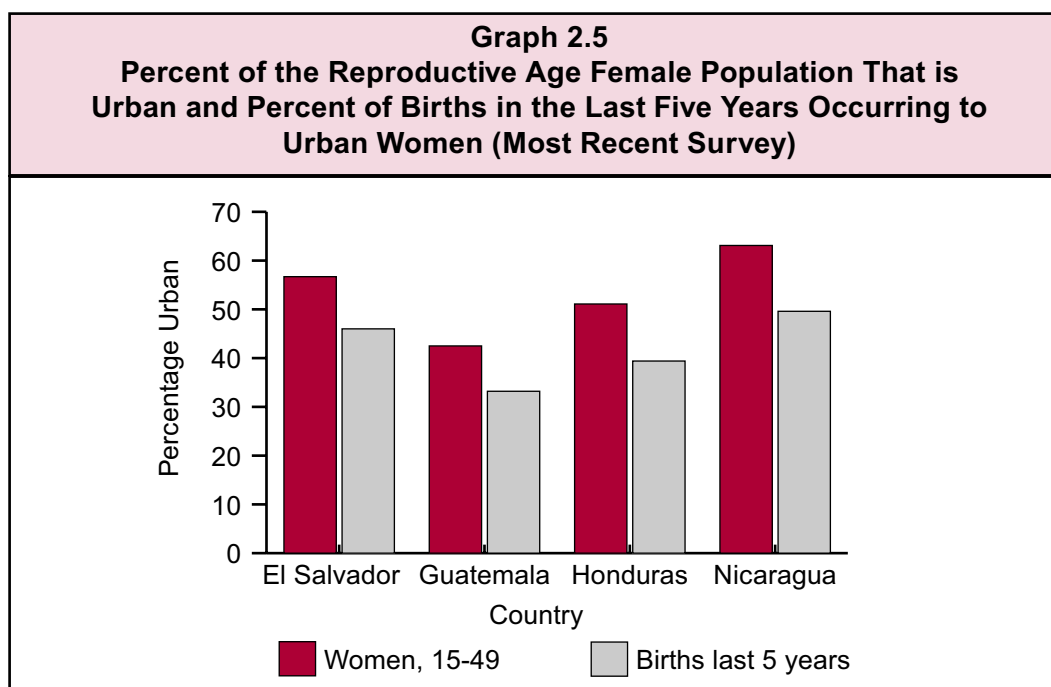


Table 2.7
Trends in the Religion Professed by Female Respondents:
Women Aged 15–49

Country	Year of Survey	Catholic	Protestant	Other	None
El Salvador	1993	na	na	na	na
El Salvador	1998	56.3	23.8	0.1	19.9
El Salvador	2002/03	50.2	31.1	0.3	18.4
Guatemala	1995*	60.7	25.9	2.2	11.2
Guatemala	1998/99	52.6	29.4	2.4	15.6
Guatemala	2002	51.2	35.8	1.5	11.5
Honduras	1991/92	65.3	21.3	0.4	13.0
Honduras	1996	56.8	26.0	0.1	17.1
Honduras	2001	53.0	34.1	0.4	12.5
Nicaragua	1992/93	na	na	na	na
Nicaragua	1998	na	na	na	na
Nicaragua	2001	na	na	na	na

* Women aged 15–44.
na: Not available.

Table 2.7 shows trends in the religion professed by reproductive age women for El Salvador, Guatemala and Honduras. For each country there is notable growth in the proportion of women claiming to be Protestants. The latest survey in each country shows more than a third of women to be Protestants in these traditionally Catholic societies.

Summary of Findings

- Since the early 1990s and in each country, there have been improvements in the proportion of households with goods and

services that could affect health conditions. However, in all four countries the rural population is considerably less likely than the urban population to have access to these services and goods.

- While there have been improvements in women's educational attainment for all four countries, there are also sizeable differentials between countries. In both El Salvador and Nicaragua about half of reproductive age women have at least some secondary level education, while in Honduras and Guatemala less than a third of women do.

CHAPTER 3



Fertility

This chapter presents findings concerning fertility levels, differentials, and time trends for the four countries being examined in this report. Information is also presented on indicators of exposure to the risk of pregnancy (i.e., age at first sexual relation), planned and unplanned fertility, and ideal number of living children.

Much of the following analysis is in terms of age-specific and total fertility rates (TFR). The TFR is interpreted as the number of births a woman would have during her childbearing years if she passed through those years experiencing the observed age-specific rates.

Fertility Levels and Trends

Table 3.1 and Graph 3.1 show TFRs based on data collected in surveys conducted since the late 1980s (except Nicaragua). Focusing first on the most recent survey conducted in each country, El Salvador and Nicaragua have the

lowest TFRs (3.0 and 3.2 live births per woman, respectively). Somewhat higher fertility was found for Guatemala and Honduras (4.4 live births per woman). To put these levels in perspective, the TFR estimated for Costa Rica in 2000 was 2.4 live births per woman, the lowest TFR in the Central American region.

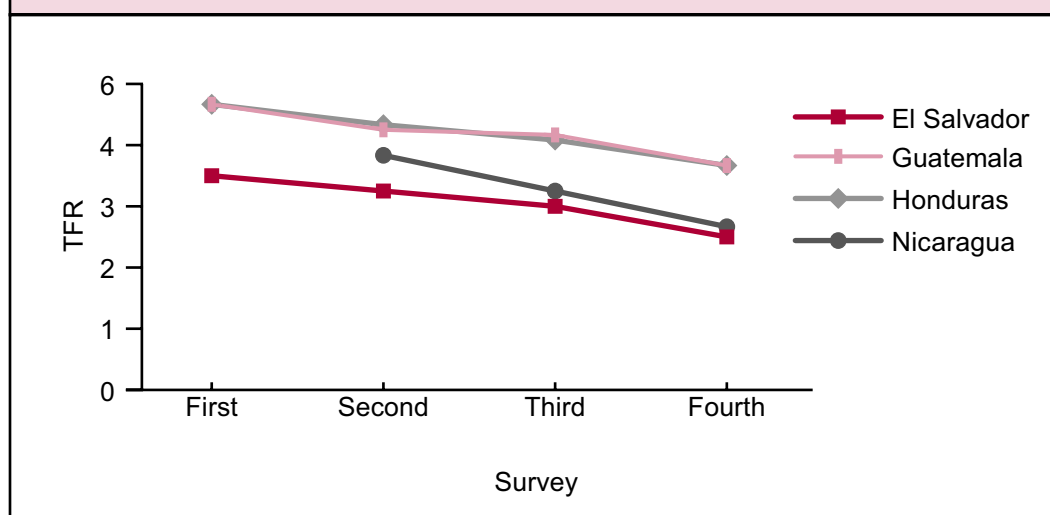
Table 3.1
Trends in Total Fertility Rates, by Area of Residence:
Women Aged 15-49

Country	Year of Survey	Time Period	Total	Urban	Rural
El Salvador	1988*	1983–1988	4.2	nc	nc
El Salvador	1993	1988–1993	3.9	3.1	4.7
El Salvador	1998	1993–1998	3.6	2.8	4.6
El Salvador	2002/03	1997–2002	3.0	2.4	3.8
Guatemala	1987*	1983–1987	5.6	4.1	6.5
Guatemala	1995	1992–1995	5.1	3.8	6.2
Guatemala	1998/99	1995–1998	5.0	4.1	5.8
Guatemala	2002	1999–2002	4.4	3.4	5.2
Honduras	1987*	1986/87	5.6	3.9	6.9
Honduras	1991/92	1989–1991	5.2	3.9	6.5
Honduras	1996	1993–1995	4.9	3.5	6.3
Honduras	2001	1998–2000	4.4	3.3	5.6
Nicaragua	1992/93	1987–1992	4.6	3.4	6.4
Nicaragua	1998	1993–1998	3.9	3.1	5.4
Nicaragua	2001	1999–2001	3.2	2.6	4.4

* Women aged 15–44.

nc - not comparable (sample in 1988 excluded some rural areas due to conflict)

Graph 3.1
Trends in the Total Fertility Rate
(Four Most Recent Surveys)



In all of the countries, fertility has been declining since the late 1980s or early 1990s. The pace of fertility decline from the first to last survey shown for each country in the table ranges from 30.4 percent in Nicaragua, to 28.5 percent in El Salvador, and to 21.4 percent each in Guatemala and Honduras.

Many studies have shown fertility levels to be lower among women with higher levels of education. This is true for the populations

examined in this report, as shown in Table 3.2. The differential, at the time of the most recent survey, between women with the highest and lowest level of education in the table, ranges from 2.8 births in El Salvador, to 3.5 births in Nicaragua, 3.8 births in Honduras and 4.3 births in Guatemala. Generally, those with at least some secondary education have TFRs below 3.0, both in the most recent and earlier surveys. The recent fertility declines have been concentrated among women with just primary education.

Table 3.2
Trends in Total Fertility Rates,
According to Education: Women Aged 15–49

Country/Education	Year of Survey		
El Salvador	1993	1998	2002/03
Total	3.9	3.6	3.0
None	5.4	5.0	4.5
1–3	4.8	4.7	3.6
4–6	3.8	3.6	2.7
7–9	3.1	3.2	2.2
10+	2.3	2.4	1.7
Guatemala	1995	1998/99	2002
Total	5.1	5.0	4.4
None	7.1	6.8	6.4
Primary	5.1	5.2	4.7
Secondary+	2.6	2.9	2.1
Honduras	1991/92	1996	2001
Total	5.2	4.9	4.4
None	7.0	7.1	6.5
1–3	6.4	6.1	5.9
4–6	4.9	4.8	4.4
7+	3.1	2.9	2.7
Nicaragua	1992/93	1998	2001
Total	4.6	3.9	3.2
None	6.9	6.1	5.2
1–3	5.8	5.2	4.2
4–6	4.3	4.1	3.3
Secondary	3.1	2.7	2.5
Superior	2.0	1.5	1.7

Age-specific fertility rates for each country are shown in Table 3.3 and Graph 3.2. The age-specific fertility rate is defined as the annual number of births per 1,000 women in the age group. Focusing first on the most recent survey, the countries exhibit a common age pattern of fertility, which is characterized by an early onset of childbearing and the completion of childbearing at a relatively late age. Childbearing begins in the late teenage years and peak fertility occurs in the age interval 20–24. The decline in the fertility rates after age 20–24 is gradual until age 30–34 is reached, when a steep decline begins. The age-specific rates for Guatemala and Honduras are similar and the age-specific rates for El Salvador and Nicaragua are similar. Honduras is notable for having the highest rate

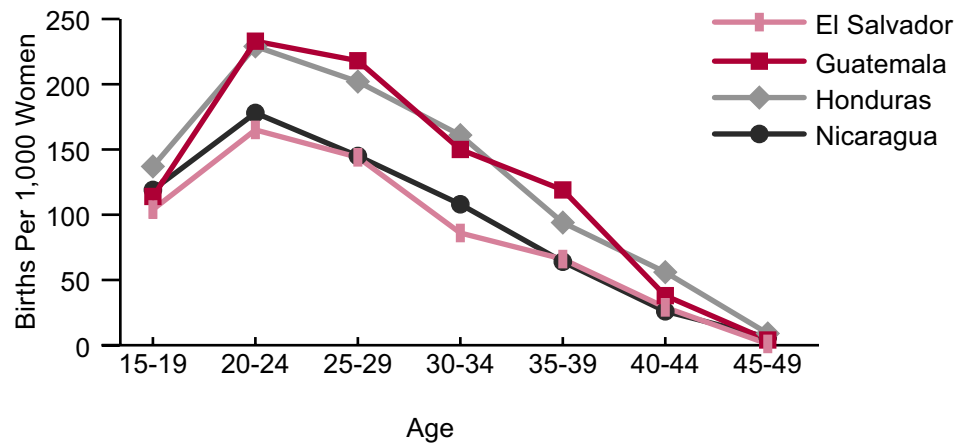
for women 15–19 (136 annual births per 1,000 women).

Graph 3.3 shows the changes in age-specific fertility rates (ASFR's) between the third from last survey conducted in the early 1990s and the most recent survey since 2000. Nicaragua is notable for having the most pronounced declines for virtually every age group, followed by El Salvador. In Honduras the ASFR declines are concentrated among women over 24, and Guatemala has an irregular pattern with a particularly large decline in the 30–34 age group. With one exception, there has been a decline in fertility for each age group in each country since the early 1990s. The exception is Honduras where the age-specific fertility rate for women aged 15–19 has remained virtually unchanged.

Table 3.3
Trends in Age-Specific and Total Fertility Rates:
Women Aged 15–49

Country	Year of Survey	Age							TFR
		15–19	20–24	25–29	30–34	35–39	40–44	45–49	
El Salvador	1993	124	221	168	126	86	39	3	3.9
El Salvador	1998	116	211	167	118	68	29	8	3.6
El Salvador	2002/03	104	165	144	86	66	29	1	3.0
Guatemala	1995	126	262	235	200	136	54	13	5.1
Guatemala	1998/99	117	276	236	182	131	60	7	5.0
Guatemala	2002	114	233	218	150	119	38	4	4.4
Honduras	1991/92	132	264	232	191	134	74	16	5.2
Honduras	1996	136	243	210	169	142	78	12	4.9
Honduras	2001	137	229	202	161	94	56	9	4.4
Nicaragua	1992/93	158	251	198	148	103	41	13	4.6
Nicaragua	1998	139	203	173	132	82	35	9	3.9
Nicaragua	2001	119	178	145	108	64	26	6	3.2

Graph 3.2
Age-Specific Fertility Rates
(Most Recent Survey)



Graph 3.3
Reductions in Age-Specific Fertility Rates (ASFR's)
From the Early 1990s to the Early 2000s
(Third From Last and Last Surveys)

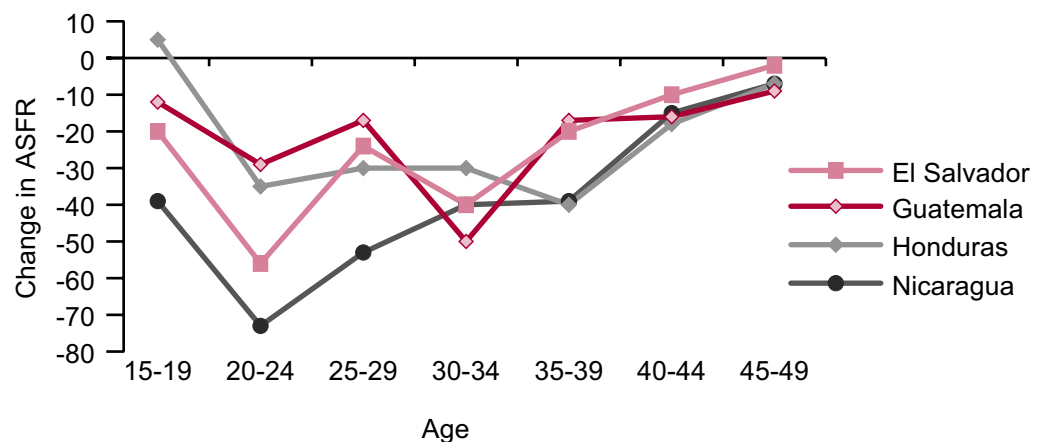
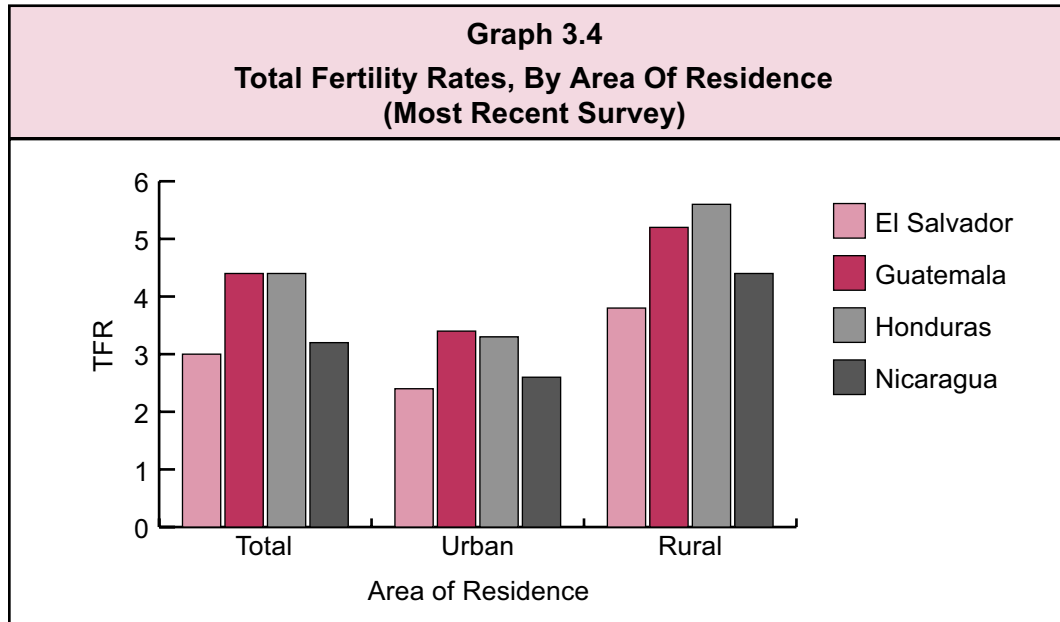


Table 3.4
Age-Specific and Total Fertility Rates, According to Area of Residence:
Women Aged 15–49 (Most Recent Survey)

Country/Area	Year of Survey	Age							TFR
		15–19	20–24	25–29	30–34	35–39	40–44	45–49	
El Salvador	2002/03								
Total		104	165	144	86	66	29	1	3.0
Urban		88	138	118	62	52	15	0	2.4
Rural		124	202	176	118	86	47	2	3.8
Guatemala	2002								
Total		114	233	218	150	119	38	4	4.4
Urban		85	184	191	101	87	20	2	3.4
Rural		133	267	240	190	145	50	7	5.2
Honduras	2001								
Total		137	229	202	161	94	56	9	4.4
Urban		114	183	160	120	55	28	1	3.3
Rural		162	277	249	202	131	84	20	5.6
Nicaragua	2001								
Total		119	178	145	108	64	26	6	3.2
Urban		99	149	119	89	39	14	2	2.6
Rural		153	226	186	141	107	49	13	4.4

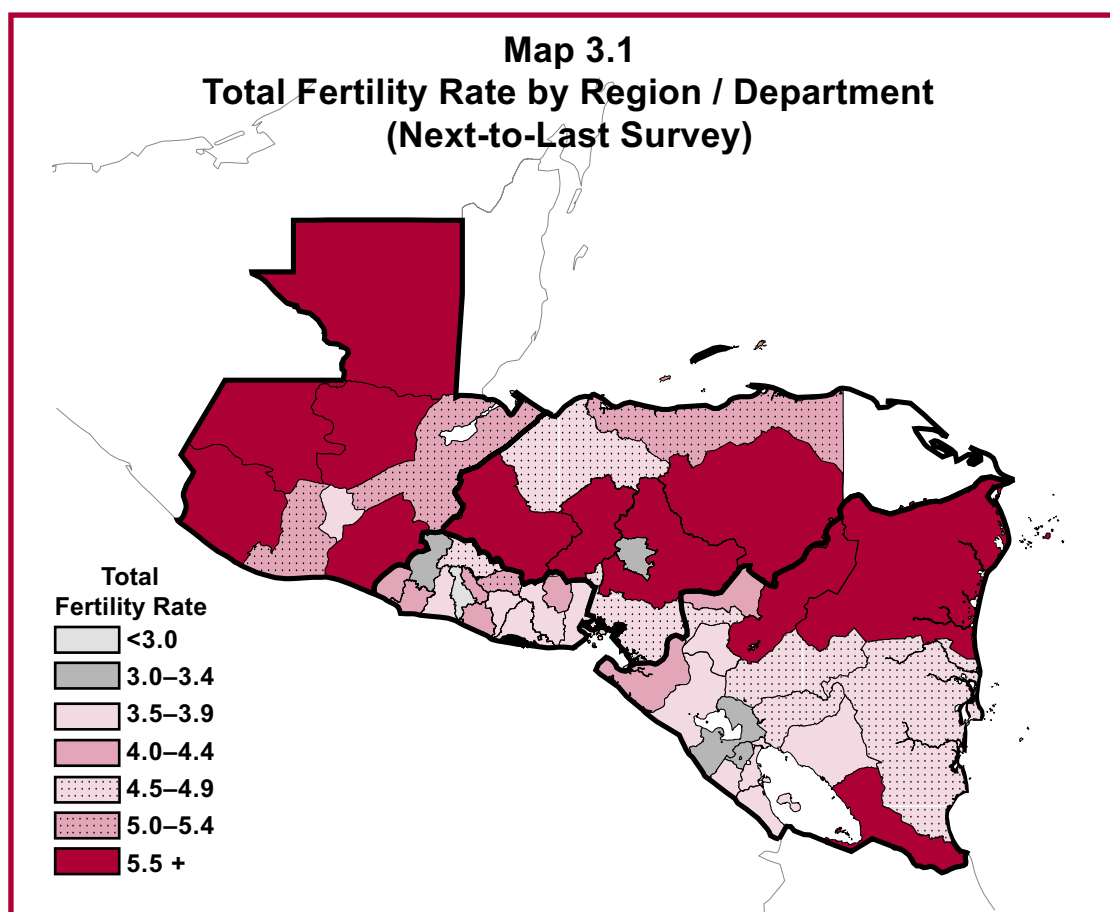
Table 3.4 shows urban/rural differentials for age-specific and total fertility rates, according to the most recent survey in each country. In all of the countries, very little childbearing occurs

among women older than 44 years, although rural women in Honduras aged 45–49 continue to bear children at a rate of 20 per 1,000 women. In all four countries fertility remains relatively



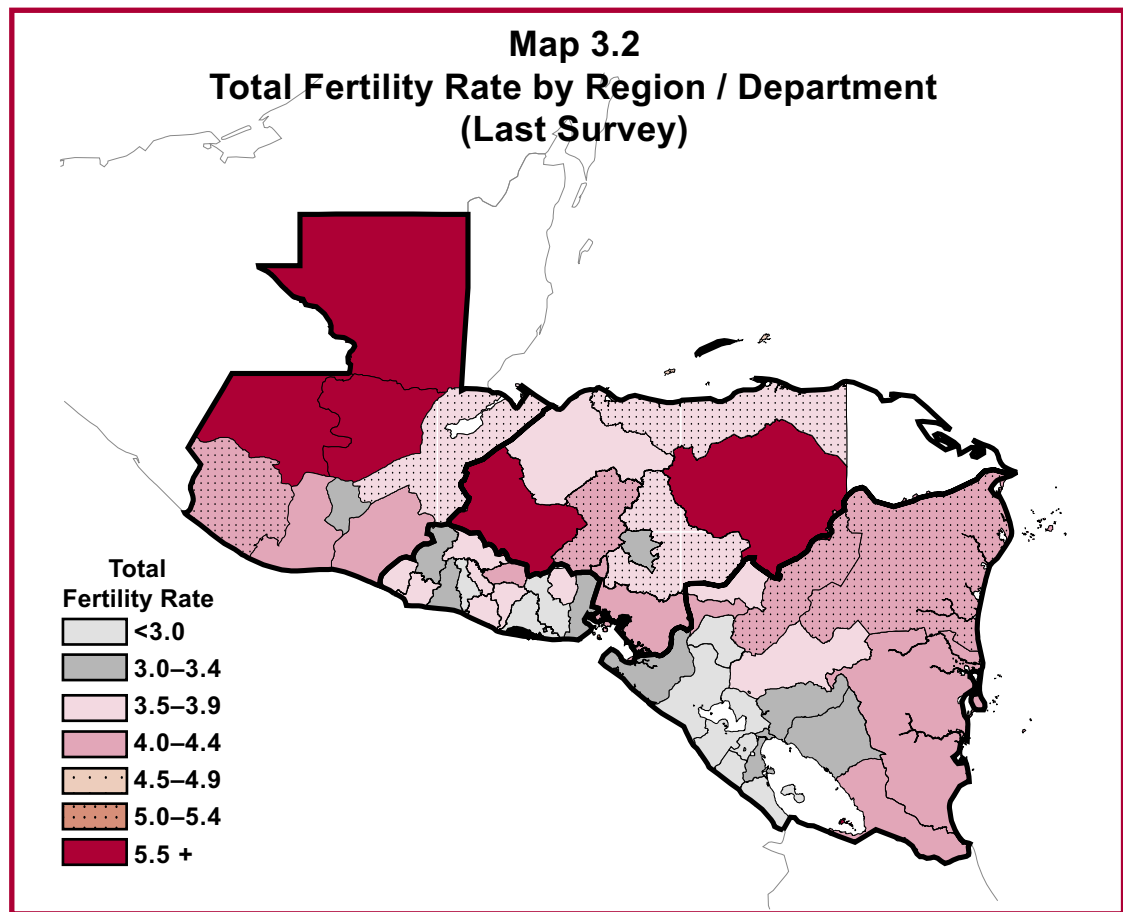
high in the rural area compared to the urban area (see Graph 3.4). For example, the rural TFR for Honduras was 5.6 births compared to 3.3 births estimated for urban areas, for a

difference of 2.3 live births per woman. In Guatemala and Nicaragua the difference is 1.8 births, while in El Salvador it is 1.4 births.



Maps 3.1 and 3.2 show the total fertility rates for subnational regions, according to the next to last and last surveys in each of the four countries. It is notable that for both periods of time there

are large areas within Guatemala and Honduras with TFRs above 5 children per woman. Within these two countries the only regions with TFRs below 4 are those containing Guatemala City,



Tegucigalpa and San Pedro Sula. El Salvador and Nicaragua, on the other hand, exhibit a more generalized fertility decline with most

departments having TFRs below 4. In the most recent surveys, El Salvador has three departments with TFRs below 3 and Nicaragua has 6, mostly on the Pacific coast of the country.

Median Age at First Intercourse, First Union, and First Birth

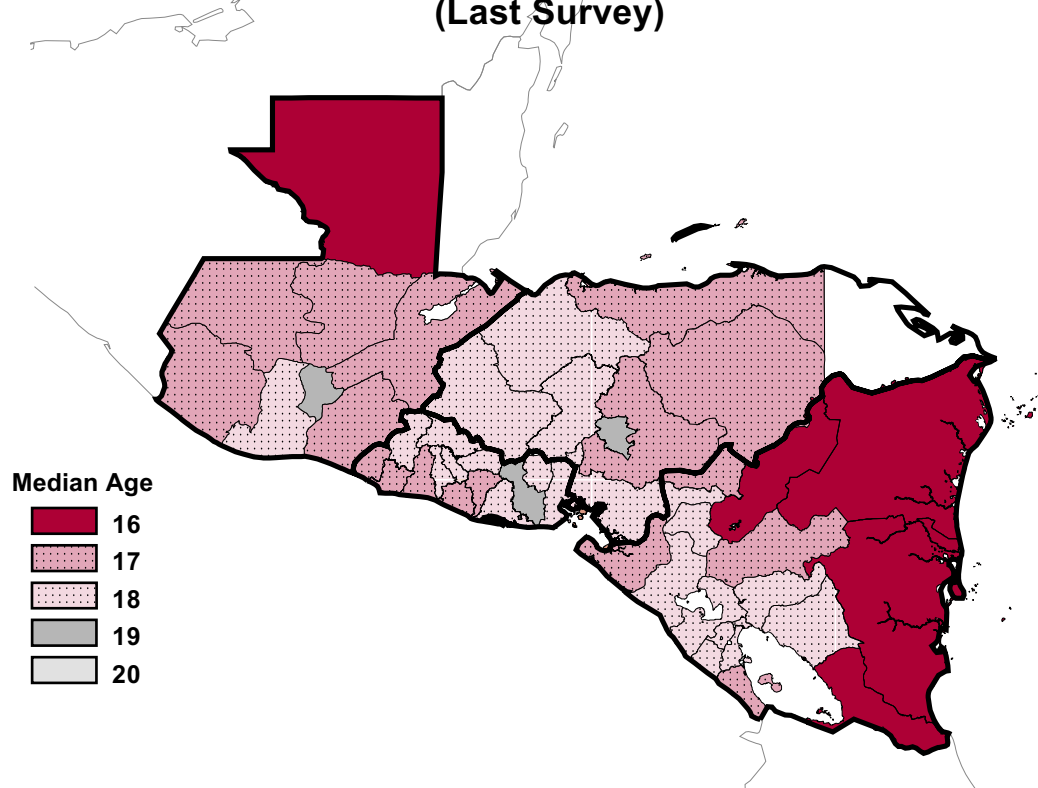
Fertility at younger ages is strongly affected by the ages at which women (and men) become sexually active, get married and become parents for the first time. Table 3.5 shows the median age at first intercourse, first union (either married or consensual), and first birth for women aged 15–49 and men aged 15–59. The median age is the age by which 50 percent of women (or men) have experienced the event in question. El Salvador, Guatemala and Honduras all have similar median ages for all three events, for both women and men. Nicaraguan women stand out as having somewhat younger ages for all three events than their counterparts in the other three countries. There are no comparable data available on Nicaraguan men. Women's age at first union exhibits the largest differential, varying between 19.8 in El Salvador and 18.3 in Nicaragua.

The male/female differentials are large and are similar for all three countries. Men report younger ages at first intercourse, but considerably older ages at first union and first birth. As a consequence the gap between first intercourse and first union is fairly large for men (between 6.1 and 6.8 years) and is fairly narrow for women (between 0.7 and 1.4 years). The delay between first union and first birth is similar for men and women.

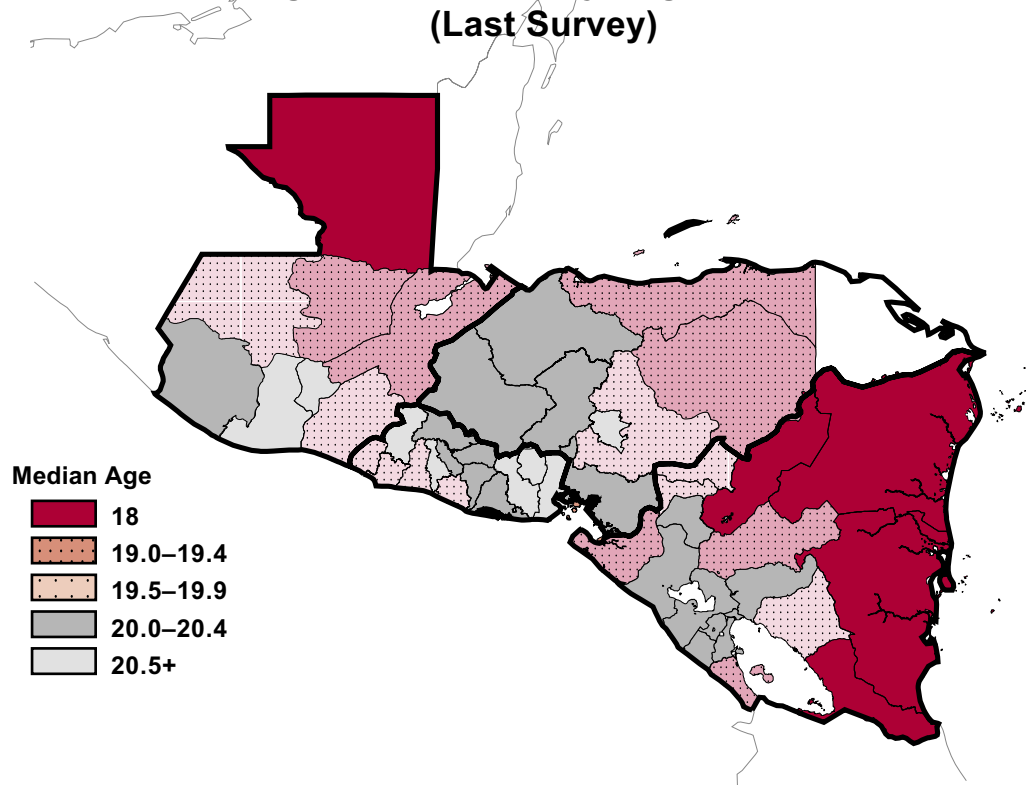
Maps 3.3 and 3.4 show that there are regional variations within countries in the age at first sex and age at first birth for women aged 15–49. These variations are similar to those for the total fertility rate. Considering age at first sex, only isolated areas around Guatemala City, San Miguel and Tegucigalpa register a median age older than 18. For age at first birth, however, there are larger regions on the Pacific coasts of Guatemala and Nicaragua, western Honduras and most of El Salvador, where the median age is 20 or older.

Table 3.5 Median Age at First Intercourse, First Union, and First Birth, According to Sex of Respondent: Women Aged 15–49 and Men Aged 15–59 (Most Recent Survey)			
Country/Sex	First Intercourse	First Union	First Birth
El Salvador			
Women	18.4	19.8	20.5
Men	16.0	22.5	24.2
Guatemala			
Women	18.4	19.3	20.4
Men	16.9	23.0	24.3
Honduras			
Women	18.3	19.0	20.2
Men	16.0	22.8	24.3
Nicaragua			
Women	17.9	18.3	19.6*
Men	na	na	na
na: Not available.			
* Women aged 25–49.			

Map 3.3
Median Age at First Sex by Region / Department
(Last Survey)



Map 3.4
Median Age at First Birth by Region / Department
(Last Survey)



Percent Married or in a Consensual Union

As can be seen in Table 3.6, while women enter unions (marriage or consensual) younger than men, they are less likely to be in a union at older ages. In El Salvador and Guatemala at ages under 35 and in Honduras under 30, women are more likely to be in a union than men, but beyond that age men are more likely to be in a union. This reflects that women are more likely to be separated, widowed or divorced at these ages. It appears that men are more likely than women to have subsequent unions after separating. The sex differential is particularly pronounced

for women 40 and older in El Salvador and Honduras.

Birth Intervals

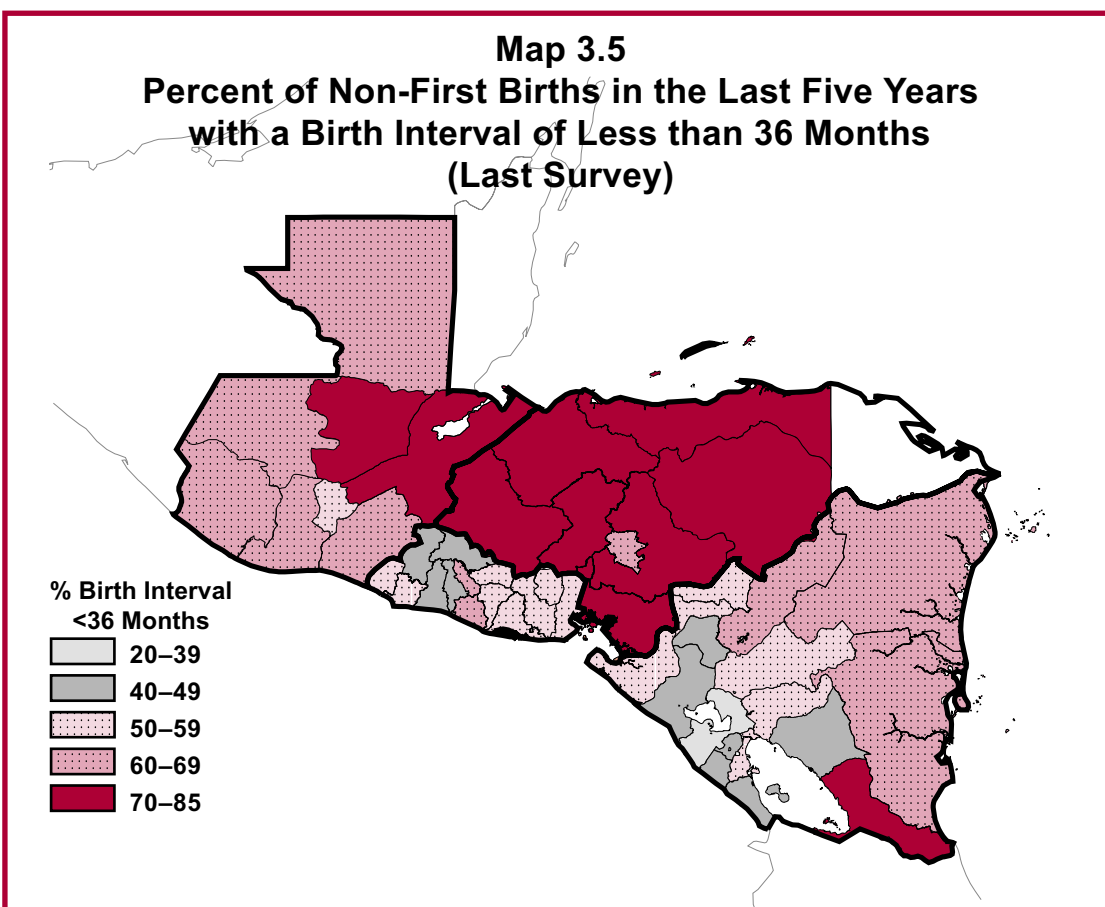
An important aspect of fertility behavior beyond the absolute number of births a woman has is the spacing between births. It has been demonstrated that shorter birth intervals are associated with a heightened risk of infant mortality. Generally, a birth at an interval less than 36 months is at higher risk and intervals less than 24 months are at considerably greater risk. As use of family planning for birth spacing increases, the proportion of births occurring after short intervals declines.

Table 3.6 Percent Currently in a Union, According to Age and Sex of Respondent: Women Aged 15–49 and Men Aged 15–59 (Most Recent Survey)					
Sex	Age	El Salvador 2002/03	Guatemala 2002	Honduras 2001	Nicaragua 2001
Women	15–19	19.2	18.2	26.0	22.3
	20–24	51.5	56.9	57.7	55.5
	25–29	67.8	77.3	71.2	69.7
	30–34	78.2	81.3	78.1	76.1
	35–34	74.7	80.4	77.1	74.7
	40–44	71.5	84.4	73.9	71.0
	45–49	66.0	73.9	70.2	64.8
	15–49	56.4	60.4	59.7	56.8
Men	15–19	1.7	5.7	5.0	na
	20–24	36.3	42.0	33.5	na
	25–29	65.3	74.2	67.0	na
	30–34	82.0	77.9	80.6	na
	35–34	85.2	90.5	84.2	na
	40–44	76.1	86.3	86.8	na
	45–49	85.3	89.0	83.8	na
	50–54	84.6	91.8	93.3	na
	55–59	90.0	90.7	88.7	na
	15–59	56.9	57.9	54.1	na

Table 3.7 shows the proportion of births (in the five years before the survey) that occurred within various windows of time after the preceding birth. Data are shown for the most recent survey in each country, and first births are excluded from the calculations. Taking El Salvador as an example, it can be seen that just 9.5 percent of

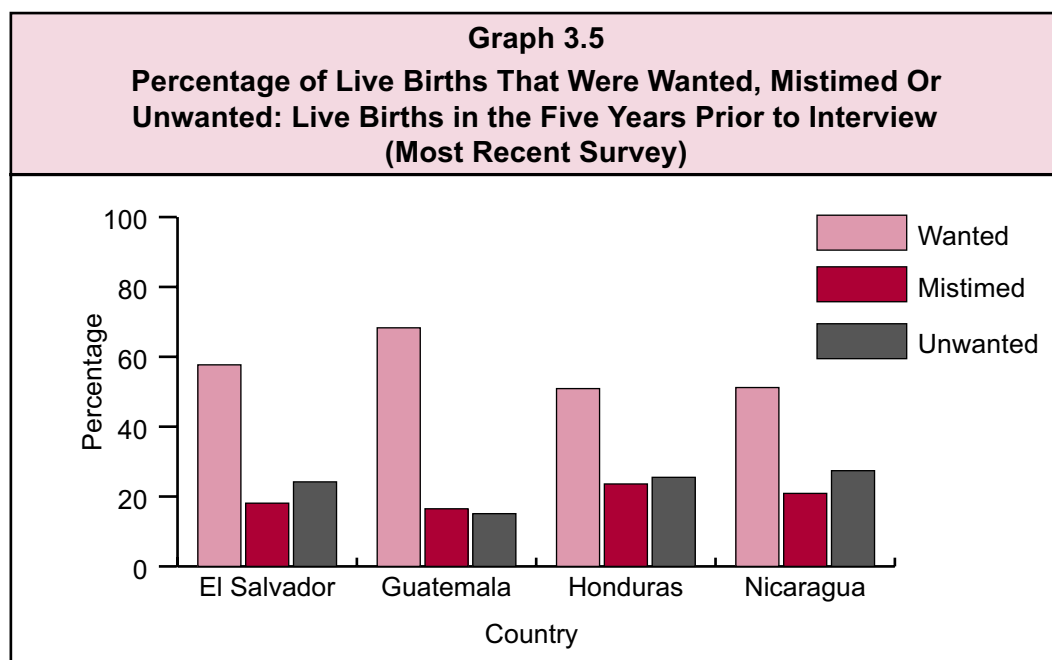
births occur within 18 months after the previous birth, but that 22.5 percent occur within two years and 51.5 percent within three years. Focusing on the column presenting the percent of births within 3 years, in El Salvador and Nicaragua slightly more than half of births occur within 3 years while in Guatemala and Honduras almost two thirds occur within 3 years.

Table 3.7 Percent of Births Occuring Within Select Periods of Time Since the Previous Birth: Births of Order 2 and Higher in the Five Years Before the Survey (Most Recent Survey)							
Country/Area	Year of Survey	Months since the previous birth					
		<18	<24	<30	<36	<48	<60
El Salvador	2002/03						
Total		9.5	22.5	39.3	51.5	66.8	78.1
Urban		7.3	19.4	33.0	43.2	57.7	71.2
Rural		11.1	24.7	43.8	57.4	73.3	83.0
Guatemala	2002						
Total		11.0	29.9	52.4	66.3	82.5	89.5
Urban		9.7	25.6	44.5	58.7	75.2	83.6
Rural		11.5	31.8	56.0	69.7	85.8	92.1
Honduras	2001						
Total		11.4	29.0	49.7	63.0	77.7	85.6
Urban		12.4	28.2	44.7	56.1	69.8	78.1
Rural		10.9	29.6	52.5	66.8	82.1	89.8
Nicaragua	2001						
Total		11.6	26.3	41.5	52.8	68.2	78.6
Urban		10.3	22.1	33.3	42.0	56.2	68.0
Rural		12.7	29.9	48.2	61.8	78.1	87.3



Map 3.5 shows the percent of births with a previous interval less than three years for sub-national regions. Almost all regions of Honduras and the northeast of Guatemala exhibit the highest percentages (70 percent or

higher). Only isolated areas of El Salvador and Nicaragua have percentages below 50 percent and only the Department of Managua in Nicaragua has less than 40 percent of births with a short interval.



Reproductive Preferences

Graph 3.5 shows the percent distribution of births in the 5 years before the most recent survey, according to planning status of the birth. A birth is classified as “wanted” if the respondent planned it at the time it occurred. A birth is classified as “mistimed” if the respondent wanted the birth, but not at the time it occurred. And, a birth is classified as “unwanted” if the

respondent did not want any more children. Despite having high fertility, Guatemala is the country with the highest percentage of births classified as “wanted” (68.3 percent) and the country with the lowest percentages classified as “mistimed” (16.5 percent) and “unwanted” (15.1 percent). Nicaragua has the highest percentage “unwanted” (27.4 percent), followed closely by Honduras (25.5 percent) and El Salvador (24.2 percent).

Table 3.8 and Graph 3.6 show the total fertility rates for the most recent survey in each country disaggregated into wanted/mistimed unwanted components. The unwanted TFR is computed the same as the overall observed TFR except that only births classified as “unwanted” are included in the numerators of the rates. The wanted TFR can be interpreted as the hypothetical TFR that would occur if all unwanted births had been

avoided. The unwanted TFR is simply the difference between the observed TFR and the wanted TFR. El Salvador has both the lowest wanted TFR (2.2 births per woman) and the lowest unwanted TFR (0.8 births per woman) among these four countries. Guatemala has the highest wanted TFR (3.7 births per woman) and Honduras has the highest unwanted TFR (1.3 births per woman).

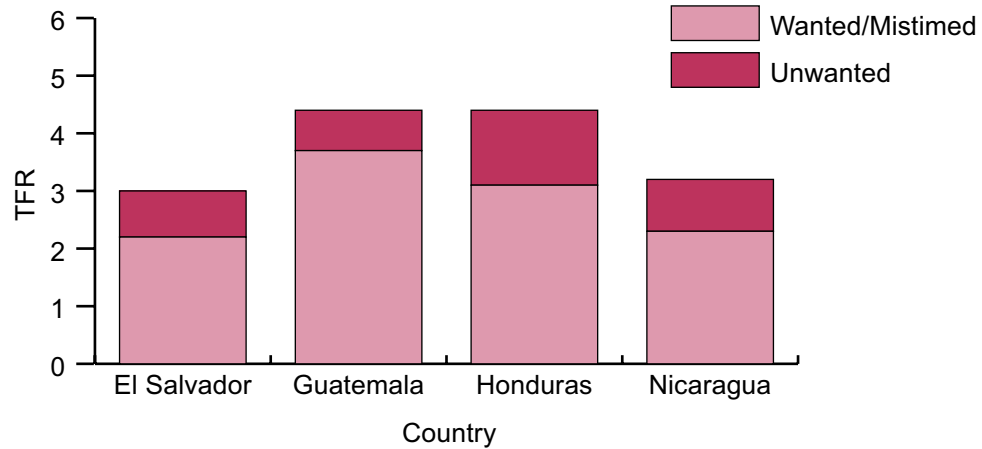
Table 3.8
Wanted and Unwanted Total Fertility Rates, According to Area of Residence:
Women Aged 15–49 (Most Recent Survey)

Country/Area	Year of Survey	Wanted	Total Fertility Rate	
			Unwanted	Observed
El Salvador	2002/03			
Total		2.2	0.8	3.0
Urban		1.8	0.6	2.4
Rural		2.8	1.0	3.8
Guatemala	2002			
Total		3.7	0.7	4.4
Urban		2.8	0.6	3.4
Rural		4.3	0.9	5.2
Honduras	2001			
Total		3.1	1.3	4.4
Urban		2.5	0.8	3.3
Rural		3.8	1.8	5.6
Nicaragua	2001			
Total		2.3	0.9	3.2
Urban		1.8	0.8	2.6
Rural		3.0	1.4	4.4

Graph 3.7 shows the same information as Graph 3.6, but is disaggregated by area of residence. The results are similar to the national TFRs. Honduras has the highest unwanted TFR in both urban and rural areas (0.8 and 1.8 births per woman, respectively), and Guatemala has the highest wanted fertility in both areas (2.8

and 4.3 births per woman, respectively). While the wanted TFRs are higher in rural areas than in urban areas, the wanted TFRs for rural El Salvador and Nicaragua are remarkably low (2.8 and 3.0). It should be noted that the wanted TFR for urban areas in both El Salvador and Nicaragua of 1.8 children per woman is below the replacement level.

Graph 3.6
Total Fertility Rate, by Whether Births Were Wanted or Not
(Most Recent Survey)



Graph 3.7
Total Fertility Rate, by Area of Residence and
Whether Births Were Wanted or not
(Most Recent Survey)

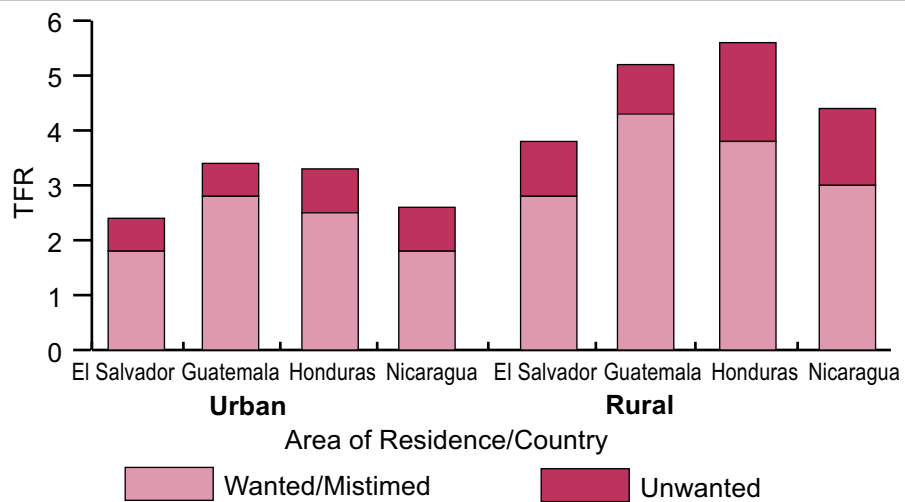


Table 3.9 shows the mean ideal family size for women and men, using data from the last survey. Focusing first on the women, the mean ideal family size is about 3 children in El Salvador, Honduras, and Nicaragua, while in Guatemala it is 3.4 children. In general, ideal family size reported by rural women exceeds that of urban women by about half a child. It should be noted

that ideal family size at the national level has not changed in any of the countries between the earlier and the later survey (data not shown). The mean ideal family size reported by men does not substantially exceed women's ideal family size. The largest difference is found in El Salvador where men report 3.8 children as their ideal compared to 3.1 children reported by women.

Table 3.9 Mean Ideal Number of Children, According to Sex of Respondent and Area of Residence: Women Aged 15-49 and Men Aged 15-59 (Most Recent Survey)			
Country/Area	Year of Survey	Ideal Number of Children	
		Women	Men
El Salvador	2002/03		
Total		3.1	3.8
Urban		2.7	3.1
Rural		3.6	4.5
Guatemala	2002		
Total		3.4	3.5
Urban		3.0	3.1
Rural		3.7	3.8
Honduras	2001		
Total		3.0	3.4
Urban		2.7	3.1
Rural		3.3	3.6
Nicaragua	2001		
Total		2.9	na
Urban		2.5	na
Rural		3.4	na

Summary of Findings

- Fertility levels have declined in all of the surveyed countries since the late 1980s or the early 1990s. The decline has been more accelerated in Nicaragua and El Salvador than in Guatemala and Honduras. According to the last survey conducted in each country, El Salvador has the lowest TFR (3.0 births per woman), followed closely by Nicaragua (3.2), while Guatemala and Honduras have the highest TFRs (4.4 births each).
- The age pattern of fertility is similar in each country, which is characterized by significant childbearing among women aged 15–19, peak fertility among women aged 20–24, and a gradual decline thereafter. However, the decline is more accelerated in Nicaragua and El Salvador than in the other two countries. In all countries, a high proportion of women who are 40 or more years old continue to have children, especially in Honduras and Guatemala.
- Substantial fertility differentials exist according to area of residence and educational level. As expected, the TFR of rural women and women with less formal education exceeds that of urban and more educated women. The differentials are more pronounced according to educational level. For example, the difference is more than four children between the lowest and highest levels of education in Guatemala.
- Ages at initiation of sexual activity and childbearing have not changed substantially over time in each of the countries. For women age at first intercourse ranges from 17.9 years to 18.4 years, age at first union ranges from 18.3 to 19.8 years, and age at first birth ranges from 19.6 years to 20.5 years. In sum, family formation begins early in these countries.
- Short birth intervals are a critical health problem in all four countries. Excluding first births, slightly more than half of all births in Nicaragua and El Salvador, and two thirds of births in Guatemala and Honduras are within 3 years of a previous birth.
- The data presented on the discrepancy between observed and wanted total fertility rates, and the planning status of births in the last 5 years, all suggest that many women are nowhere close to achieving their reproductive goals, and that there is still considerable unmet demand for family planning services.

CHAPTER 4

Family Planning

This chapter presents information on knowledge, use, and source of contraceptive methods in the four surveyed countries. Desire to use contraceptive methods among non-users and preferred method is also examined.

Knowledge of Contraceptives

According to the most recent survey, nearly all women surveyed in El Salvador, Honduras, and Nicaragua have heard of at least some method of contraception (Table 4.1). Knowledge of at least one method is lower among Guatemalan women in union (93.3 percent). A relatively high percentage of men in union aged 15–59 also have knowledge of at least one contraceptive method. Knowledge ranges from 95.3 percent in Guatemala to 99.9 percent in Honduras. Men's knowledge of condoms was not investigated in El Salvador. No data are available for men in Nicaragua.

In each country, condoms, oral contraceptives, injections, and female sterilization are the most widely recognized methods among both women and men (Table 4.1). With the exception of Guatemala and Honduras, knowledge of these methods is above 90 percent. Among women, knowledge of the IUD ranges from a low of 57.7 percent in Guatemala to a high of 95.7 percent in Honduras. Knowledge of rhythm ranges from

a low of 46.8 percent in Guatemala to a high of 58.5 percent in Honduras, while knowledge of withdrawal ranges from 26.7 percent in Guatemala to 53.9 percent in Nicaragua. Among men, knowledge of male sterilization or vasectomy ranges from a low of 57.0 percent in Honduras to a high of 85.1 percent in El Salvador.

Table 4.1
Knowledge of Specific Contraceptive Methods: Married Women of Fertile Age and Married Men Aged 15–59 (Most Recent Survey)

Contraceptive	El Salvador 2002/03		Guatemala 2002		Honduras 2001		Nicaragua 2001	
	Women*	Men	Women†	Men	Women*	Men	Women†	Men
At least one	98.9	99.3	93.3	95.3	99.9	99.9	99.2	
Condoms	97.9	na	68.4	85.1	98.8	99.3	94.7	na
Orals	96.2	93.0	87.9	86.6	99.0	93.1	98.2	na
Injection	97.4	92.4	86.9	83.2	98.3	87.3	96.9	na
Fem. Sterilization	94.6	96.7	82.9	83.8	98.5	94.2	90.5	na
IUD	78.7	58.9	57.7	47.9	95.7	79.1	89.7	na
Male Sterilization	58.1	85.1	62.7	73.9	58.8	57.0	64.7	na
Rhythm	56.8	63.0	46.8	55.2	58.5	59.5	55.4	na
Vaginals	41.0	51.2	37.8	39.9	45.7	43.3	38.1	na
Withdrawal	29.0	48.5	26.7	28.9	53.3	69.8	53.9	na
Norplant	21.7	13.6	16.8	11.7	5.7	6.0	7.5	na
MELA	18.6	11.6	31.5	29.5	na	na	69.6	na
Billings	14.4	10.4	inc	inc	17.9	10.2	inc	na
EOC	11.8	22.7	na	na	3.3	13.5	19.4	na

* Married women aged 15–44.

† Married women aged 15–49.

EOC: Emergency oral contraceptives.

na: Not available.

inc: Included with rhythm.

Current Use of Contraceptives

This section focuses on women in legal or consensual marriages, because they represent the majority of sexually active women, have greater frequency of intercourse, and have higher fertility and risk of unintended pregnancies. Data are not presented for married men since their use is very similar to that of married women.

According to the most recent survey, El

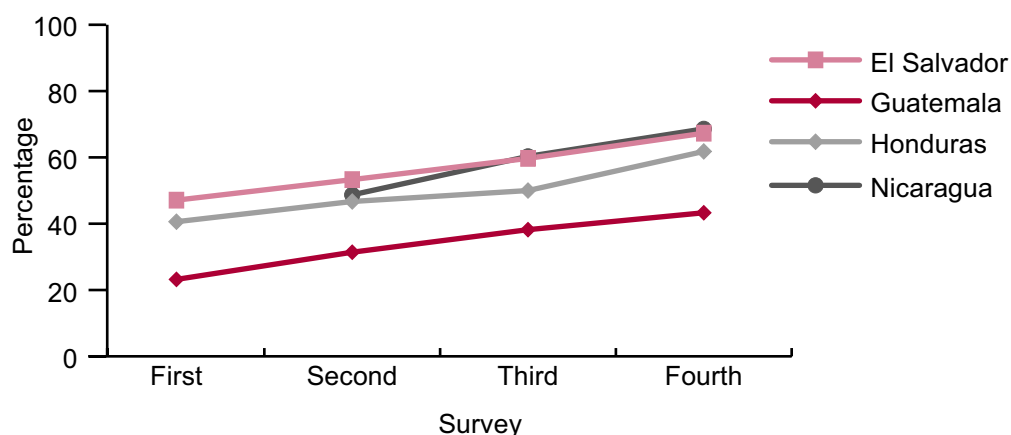
Salvador, Honduras, and Nicaragua each exhibit a relatively high prevalence of contraceptive use (over 60 percent of currently married women), while use in Guatemala is relatively low (43.3 percent) (Table 4.2). Contraceptive use is highest in Nicaragua (68.6 percent), followed closely by El Salvador (67.3 percent), while use in Honduras is 61.8 percent. As expected, urban women are more likely than their rural counterparts to be current users of contraceptives in all of the countries. The difference between urban and rural use is highest in Guatemala (22

Table 4.2
Trends in Contraceptive Use, by Area of Residence: Married Women of Fertile Age (Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	1988*	47.1	59.9	34.2
El Salvador	1993*	53.3	61.3	45.6
El Salvador	1998*	59.7	67.8	51.2
El Salvador	2002/03*	67.3	73.4	60.1
Guatemala	1987†	23.2	43.0	13.8
Guatemala	1995†	31.4	48.9	19.8
Guatemala	1998/99†	38.2	52.3	27.7
Guatemala	2002†	43.3	56.7	34.7
Honduras	1987*	40.6	59.3	29.9
Honduras	1991/92*	46.7	60.7	36.1
Honduras	1996*	50.0	61.7	40.4
Honduras	2001*	61.8	70.4	54.6
Nicaragua	1992/93†	48.7	61.2	33.2
Nicaragua	1998†	60.3	66.3	51.4
Nicaragua	2001†	68.6	73.3	62.3

* Married women aged 15–44.
† Married women aged 15–49.

Graph 4.1
Trends in the Use of Contraceptives, According to Last Four Surveys: Married Women of Fertile age (Four Most Recent Surveys)



percentage points) and lowest in Nicaragua (11 percentage points), indicating that rural women in Nicaragua may have greater access to family planning counseling and services than rural women living in Guatemala.

Use of contraceptive methods has been increasing steadily over the past decade in each of the countries (Graph 4.1 and Table 4.2). Since the early 1990s, use has increased by almost 20

percentage points in Nicaragua, 15 percentage points in Honduras, 14 percentage points in El Salvador, and by almost 12 percentage points in Guatemala. In all of the countries, the increase in contraceptive use has been greater in the rural area, primarily because use back in the early 1990s in the rural areas of each country was relatively low. Rural Nicaragua stands out in that use has increased by a spectacular 29 percentage points since 1992/93. In rural Honduras, use increased by almost 19 percentage points, while in rural El Salvador and rural Guatemala use increased by almost 15 percentage points. It should be pointed out that urban use in El Salvador, Honduras, and Nicaragua is over 70 percent, according to the last survey conducted in these countries. Only 56.7 percent of urban women in Guatemala were using a contraceptive method at the time of the last survey.

All of the countries profiled in this report exhibit a high reliance on contraceptive methods of high efficacy, such as female sterilization, injections, oral contraceptives, and the IUD (Table 4.3).

In Nicaragua and El Salvador these methods account for 88.3 percent and 86.3 percent of total use, respectively. In Honduras and Guatemala these methods account for 77.0 percent and 71.8 percent of total use, respectively, as use of rhythm/Billings and withdrawal is higher in these countries than in Nicaragua and El Salvador.

In all of the countries, female sterilization is the most used method of contraception, ranging from 16.8 percent in Guatemala to 32.7 percent in El Salvador. Since sterilization facilities are generally found in urban areas, use of this method is higher in urban areas than in rural areas (Table 4.4). In El Salvador and Guatemala, the injection is the second most used method, while in Honduras and Nicaragua it is the pill. It should be noted that in El Salvador, Honduras, and Nicaragua, the injection is used more in the rural area than in the urban area. With the exception of Honduras, the use of the IUD is relatively low, and in all of the countries, the use of the IUD is higher in urban areas than in

Table 4.3
Trends in the Use of Contraceptive Methods, by Method and Type of Method:
Married Women of Fertile Age

Country	Year of Survey	Total	Type of Method									
			Female Steril.	Injection	Orales	IUD	Con-doms	Rhythm/Billings	With-drawal	Other	Modern [†]	Traditional [§]
El Salvador*	1993	53.3	31.5	3.6	8.7	2.1	2.1	3.0	2.0	0.4	48.0	5.4
	1998	59.7	32.4	8.9	8.1	1.5	2.5	3.1	2.6	0.7	53.4	6.4
	2002/03	67.3	32.7	18.3	5.8	1.3	2.9	2.9	2.6	0.9	61.0	6.4
Guatemala [†]	1995	31.4	14.3	2.5	3.8	2.6	2.2	3.6	0.9	1.5	26.9	4.5
	1998/99	38.2	16.7	3.9	5.0	2.2	2.3	5.7	1.5	0.8	30.9	7.3
	2002	43.3	16.8	9.0	3.4	1.9	2.3	6.3	2.3	1.4	34.6	8.7
Honduras*	1991/92	46.7	15.6	0.5	10.1	5.1	2.9	6.7	5.0	0.3	34.7	12.0
	1996	50.0	18.1	1.1	9.9	8.5	3.2	3.7	5.3	1.3	40.8	10.3
	2001	61.8	18.0	9.6	10.4	9.6	3.2	4.4	6.4	0.2	51.0	10.8
Nicaragua [†]	1992/93	48.7	18.5	1.2	12.9	9.3	2.6	2.6	1.1	0.4	44.9	3.8
	1998	60.3	26.1	5.2	13.9	9.1	2.6	1.6	1.0	0.5	57.4	2.9
	2001	68.6	25.3	14.3	14.6	6.4	3.3	1.5	1.0	2.3	64.4	4.2

* Married women aged 15–44.

[†] Married women aged 15–49.

[‡] Includes female sterilization, vasectomy, injectables, orals, IUDs, condoms, vaginal methods, and Norplant.

[§] Includes rhythm, Billings, withdrawal, MELA, and folkloric methods.

rural areas. As the table shows, use of condoms as a family planning method is relatively low in each of the countries.

As mentioned earlier, the use of contraceptive methods has been increasing steadily over the past decade in each of the countries. The

increase in use is principally due to an increase in the use of temporary methods, notably the injection (see Graph 4.2 and Table 4.3). Since the early 1990s, the use of female sterilization has not changed substantially in any of the countries.

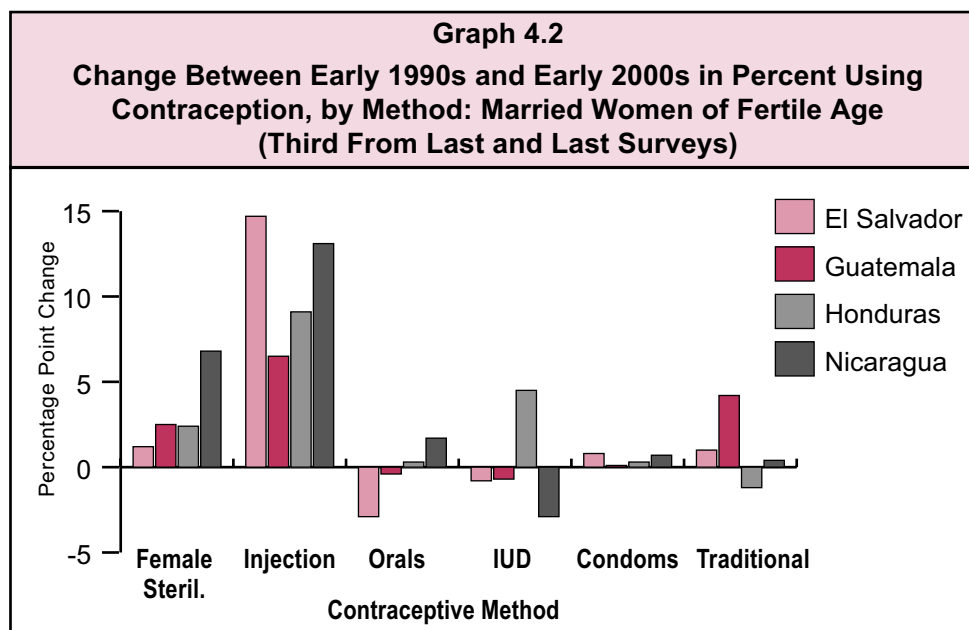


Table 4.4
Current Use of Contraceptive Methods, According to Area of Residence: Married Women of Fertile Age (Most Recent Survey)

Country/ Area	Year of Survey	Total	Orals	IUD	Condoms	Injection	Female Steril.	Rhythm/ Billings	With- drawal	Other
El Salvador	2002/03*									
Total		67.3	5.8	1.3	2.9	18.3	32.7	2.9	2.6	0.9
Urban		73.4	5.3	2.0	3.5	17.2	37.5	3.1	3.4	1.4
Rural		60.1	6.2	0.5	2.3	19.5	27.1	2.6	1.5	0.4
Guatemala	2002†									
Total		43.3	3.4	1.9	2.3	9.0	16.8	6.3	2.3	1.3
Urban		56.7	4.3	3.4	3.6	10.7	23.1	6.6	2.6	2.4
Rural		34.7	2.8	0.9	1.5	7.9	12.8	6.2	2.1	0.4
Honduras	2001*									
Total		61.8	10.4	9.6	3.2	9.6	18.0	4.4	6.4	0.2
Urban		70.4	11.5	14.7	4.1	8.8	20.3	5.3	5.6	0.1
Rural		54.6	9.4	5.3	2.5	10.3	16.0	3.7	7.1	0.2
Nicaragua	2001†									
Total		68.6	14.6	6.4	3.3	14.3	25.3	1.5	1.0	2.3
Urban		73.3	15.6	8.8	4.3	11.4	28.7	1.5	1.1	1.9
Rural		62.3	13.3	3.1	2.0	18.1	20.7	1.4	0.8	2.7

* Married women aged 15–44.

† Married women aged 15–49.

Table 4.5 and Graph 4.3 show contraceptive use by age of the woman, illustrating that in all four countries use rises steadily with age until the late 30's or early 40's at which age it levels off. Graph 4.4 shows the increase in use by age between the early 1990's and the early 2000's. El Salvador exhibits a distinctive pattern with the increase in use being especially pronounced for married women ages 15–24 and 40–44. In Nicaragua, the increase in use was high among married women aged 15–24, moderately high among married women aged 25–44, and uniform,

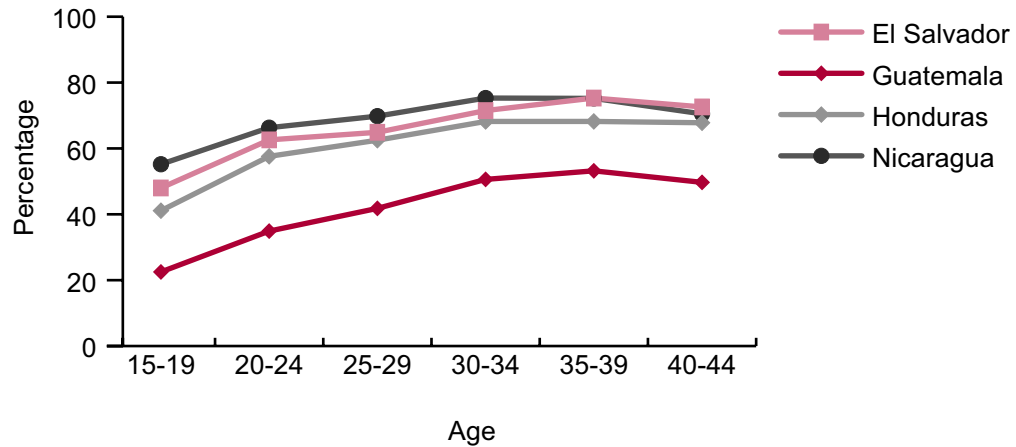
at a moderate level, for remaining age groups. In both Honduras and Guatemala the increase in use was fairly uniform across all age groups, but in Honduras it hovers around a 20 to 25 percentage point increase, while in Guatemala it is in the range of 10 to 15 percentage points.

The information on use by age is encouraging in that it demonstrates that women are initiating the use of contraception at younger ages, rather than waiting until they have reached or exceeded their desired family in their mid- to late-20s.

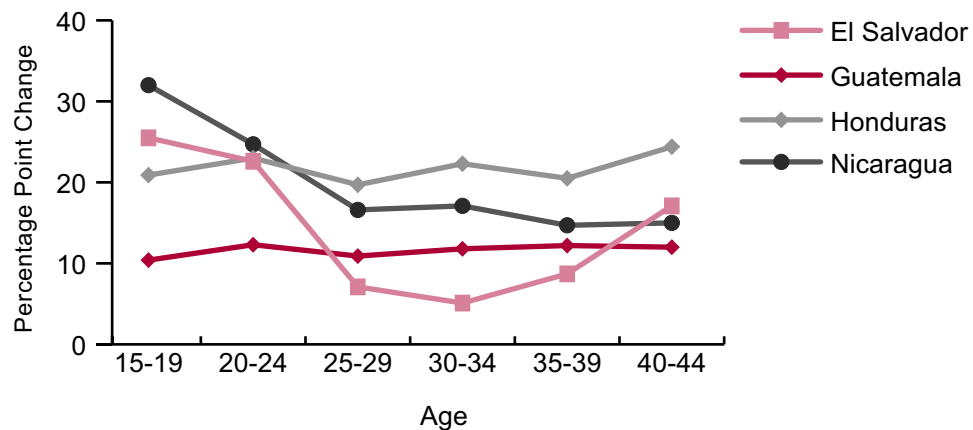
Table 4.5
Trends in the Use of Contraceptive Methods, by Age:
Married Women of Fertile Age

Country	Year of Survey	15–19	20–24	25–29	30–34	35–39	40–44	45–49
El Salvador*	1993	22.5	40.0	57.8	66.4	66.6	55.5	na
	1998	33.4	48.4	58.7	68.5	70.5	69.6	na
	2002/03	48.0	62.6	64.9	71.5	75.3	72.6	na
Guatemala†	1995	12.1	22.6	30.9	38.8	41.0	37.7	25.8
	1998/99	14.6	25.7	39.2	50.5	51.0	44.1	31.2
	2002	22.5	34.9	41.8	50.6	53.2	49.7	40.0
Honduras*	1987	20.2	34.6	42.8	45.9	47.7	43.4	na
	1996	27.6	39.4	54.2	57.8	58.0	55.5	na
	2001	41.1	57.6	62.5	68.2	68.2	67.8	na
Nicaragua†	1992/93	23.2	41.6	53.2	58.2	60.5	55.5	38.9
	1998	39.8	53.8	64.6	69.4	70.0	63.7	48.1
	2001	55.2	66.3	69.8	75.3	75.2	70.5	58.6
* Married women aged 15–44.								
† Married women aged 15–49.								
na: Not available.								

Graph 4.3
Use of Contraceptive Methods, by Age:
Married Women of Fertile Age
(Most Recent Survey)

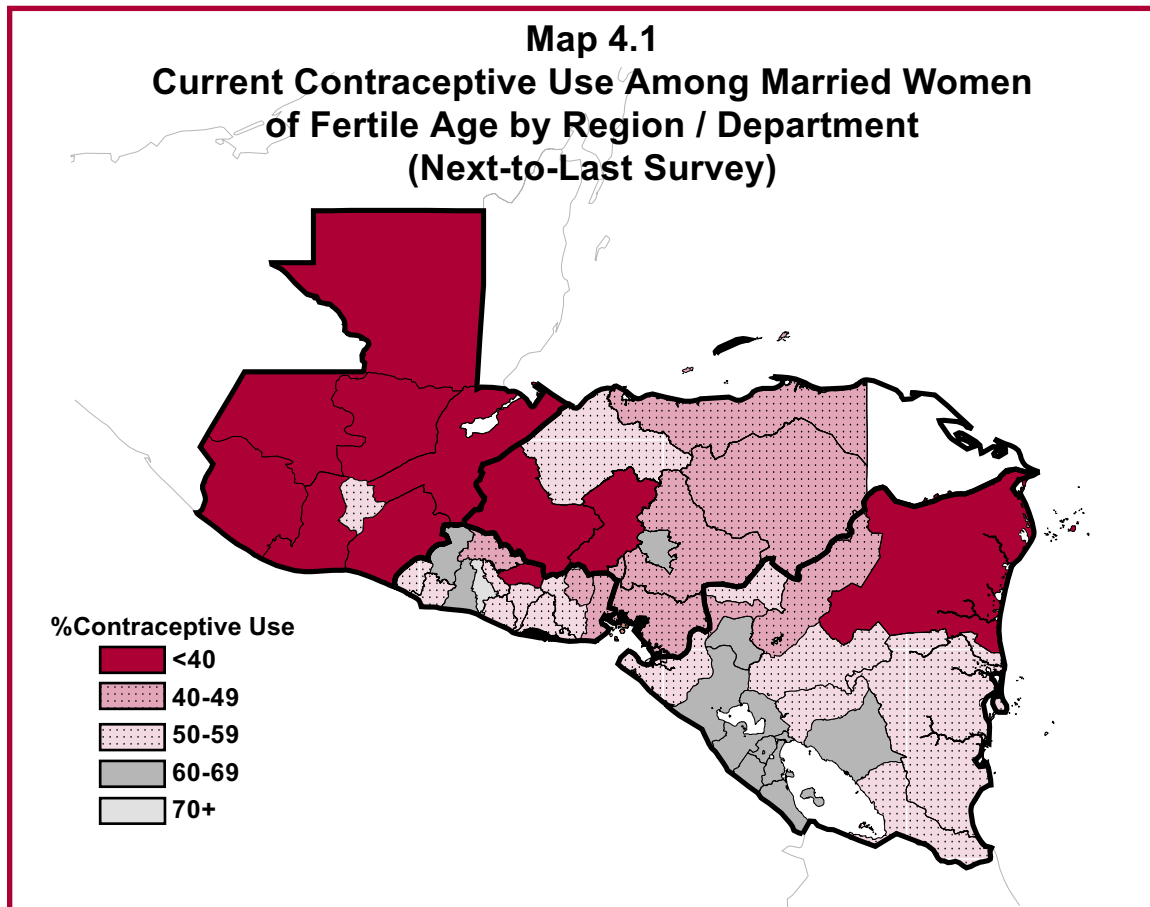


Graph 4.4
Change Between Early 1990s and Early 2000s in Percent Using
Contraception, by Age: Married Women of Fertile Age
(Third From Last and Last Surveys)

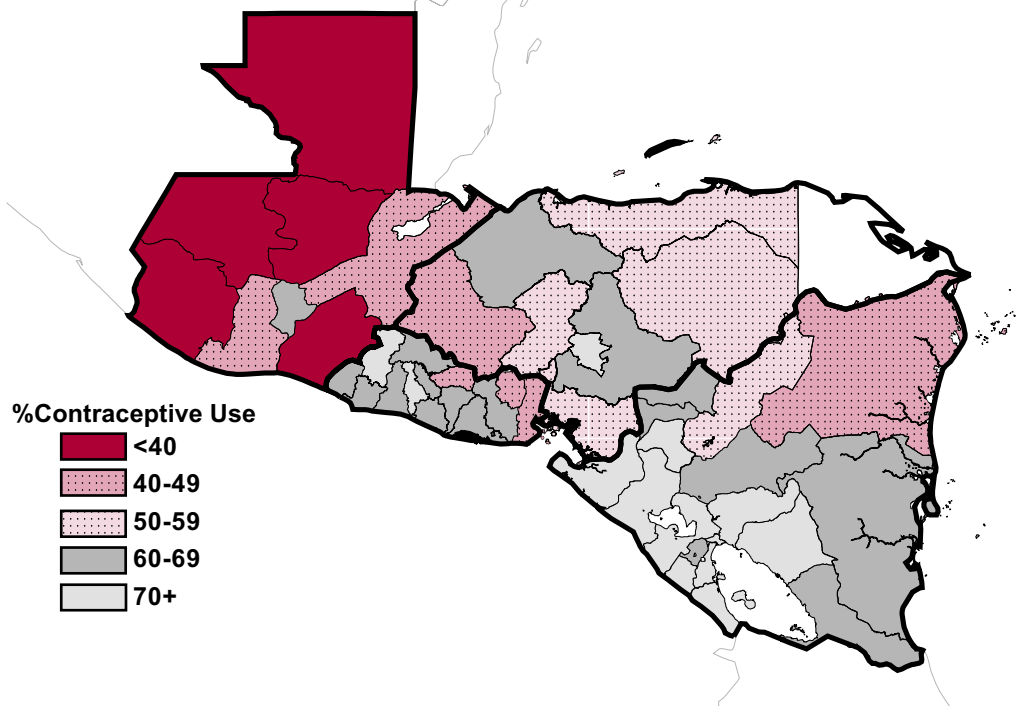


Maps 4.1 and 4.2 show contraceptive prevalence for subnational regions according to the next to last and last surveys in each of the four countries. As expected from information on fertility levels, the areas of lowest contraceptive use are in Guatemala and Honduras. The increase in prevalence between the two surveys is very

widespread for both El Salvador and Nicaragua. All but three departments in El Salvador and two departments in Nicaragua had sixty percent or more of women in union using a method at the time of the most recent survey. Only one region in Guatemala and three in Honduras had prevalence above 60 percent at the last survey.



Map 4.2
Current Contraceptive Use Among Married Women
of Fertile Age by Region / Department
(Last Survey)



Source of Contraceptives

Table 4.6 and Graph 4.5 present the percentage of currently married users of modern contraception who obtained their method from each type of source shown in the table (data for El Salvador include source of modern as well as traditional methods). Focusing on the last survey conducted in each country, source of contraceptives

varies from one country to another. However, all countries have one thing in common: the Ministry of Health is the principal source of contraceptive methods in each country, ranging from 32.2 percent in Guatemala to 63.6 percent in Nicaragua. As shown in the table, the relative participation of the Ministry of Health has been increasing in each country over the past decade.

Table 4.6
Trends in the Source of Modern Contraceptive Methods:
Married Women of Fertile Age

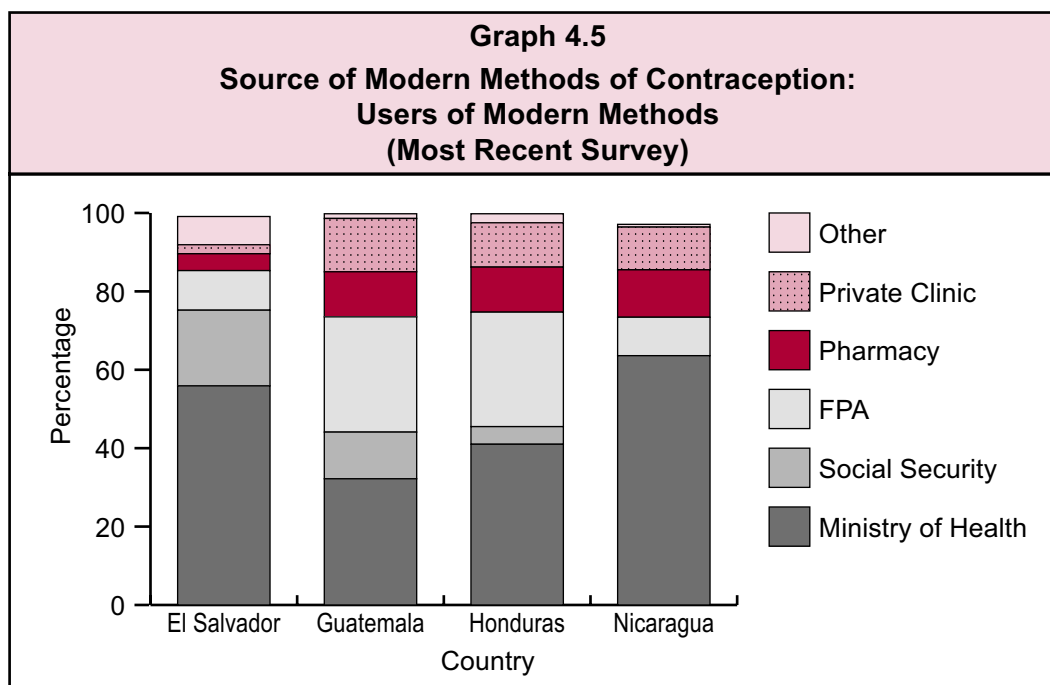
Country	Year of Survey	Ministry of Health	Social Security	FPA [‡]	Pharmacy	Private Clinic	Other
El Salvador*	1993	48.9	14.5	15.3	9.3	4.2	7.5
	1998	47.1	18.2	15.6	5.8	4.4	8.5
	2002/03	55.9	19.3	10.1	4.3	2.3	7.2
Guatemala [†]	1995	18.9	8.2	41.5	11.6	17.0	2.1
	1998/99	20.6	4.6	37.5	11.8	14.8	9.4
	2002	32.2	11.9	29.4	11.5	13.6	1.2
Honduras*	1991/92	30.8	7.9	24.2	14.2	20.7	2.2
	1996	27.0	7.8	37.0	13.0	11.8	2.6
	2001	41.0	4.5	29.2	11.5	11.3	2.3
Nicaragua [†]	1992/93	58.6	na	6.0	18.0	11.8	3.6
	1998	62.0	na	11.9	11.4	11.2	2.1
	2001	63.6	na	9.8	12.1	10.9	0.7

* Married women aged 15–44. For El Salvador, modern as well as traditional methods are included.

[†] Married women aged 15–49.

[‡] Family planning association.

NA: Not available.



The second most important source of contraception in El Salvador is the Social Security Institute, while the private family planning association is the second most important source in Guatemala and Honduras. In Nicaragua, pharmacies are in second place.

While the family planning association is the third most important source of contraception in El Salvador, it is private clinics or physicians in Guatemala, and private pharmacies in Honduras and Nicaragua.

In general, the relative participation of the

family planning association and private clinics in each country has been declining over the past decade. This is probably due to the fact that users of family planning services can obtain services and supplies at a lower price (or at no cost) from the public sector than they can from the private sector. Cost is particularly important for women who have traditionally been non-users of contraception, such as the rural, poor, and less educated women. However, the question is how much longer can the public sector afford to provide highly subsidized family planning services?

Intention to Use Contraception Among Non-Users

Married, fecund women who were not using any contraceptive method at the time of the last survey conducted in each country were asked if they planned to use any method now or in the future. Intention to use in the future among non-users has to be taken into account when forecasting contraceptive needs of the family planning providers. Overall, between 43.0 percent (Guatemala) and 72.5 percent (Honduras) intended to use a contraceptive method now or in the future (Table 4.7). It should be noted that the percentage of women who desire to use a contraceptive method does not vary substantially according to area of residence.

Of the married women who desire to use a method now or in the future, the most preferred method in all of the countries is the injection, ranging from 31.9 percent in Honduras to 43.4 percent in El Salvador (Table 4.8 and Graph 4.6). In El Salvador, Guatemala, and Honduras the second most preferred method is female sterilization, while it is the pill in Nicaragua. Oral contraceptives are in third place in El Salvador, Guatemala, and Honduras, while female sterilization is in third place in Nicaragua. The percentage of women who desire to use rhythm/Billings or withdrawal is relatively small in each country. These preferences contrast with actual current use in which female sterilization is most common in all four countries and oral contraceptives is second in Honduras and Nicaragua. It should be noted that a significant percentage of non-users in El Salvador, Guatemala, and Honduras are undecided about the method they would prefer to use.

Table 4.7
Desire to Use Contraceptive Methods Now or
in the Future, by Area of Residence: Married Women of
Fertile Age, Non-Users of Contraception
(Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03*	52.1	55.5	49.4
Guatemala	2002†	43.0	46.1	40.9
Honduras	2001*	72.5	75.3	71.0
Nicaragua	2001†	61.7	62.7	60.8
* Married women aged 15–44.				
† Married women aged 15–49.				

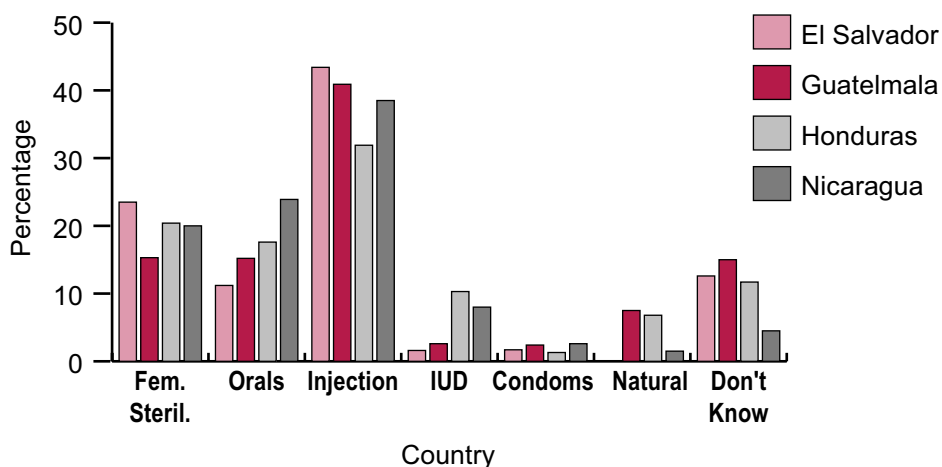
Table 4.8
Preferred Contraceptive Method Among Married Women of
Fertile Age, Non-Users of Contraception, Who Desire to Use
Contraceptives Now or in the Future (Most Recent Survey)

Contraceptive Method	El Salvador 2002/03*	Guatemala 2002†	Honduras 2001*	Nicaragua 2001†
Injection	43.4	40.9	31.9	38.5
Fem. Sterilization	23.5	15.3	20.4	20.0
Orals	11.2	15.2	17.6	23.9
IUD	1.6	2.6	10.3	8.0
Condom	1.7	2.4	1.3	2.6
Rhythm/Billings	2.9	6.6	4.8	0.9
Withdrawal	0.3	0.9	2.0	0.6
Other	2.7	0.6	0.1	1.0
Don't Know	12.6	15.0	11.7	4.5

* Married women aged 15–44.

† Married women aged 15–49.

Graph 4.6
Preferred Contraceptive Method:
Married, Non-Users of Contraception
(Most Recent Survey)



Summary of Findings

- Awareness of contraceptive methods is high; at least 91 percent of women and 95 percent of men of reproductive age in each country indicated that they have heard of at least one method. The four most known methods among women in each country include condoms, oral contraceptives, the injection, and female sterilization.
- Current use of contraceptives is also relatively high in El Salvador, Honduras, and Nicaragua as more than 61 percent of married women of reproductive age were using a method at the time that the last survey was conducted in each country. Only 43 percent of married women were found to be using contraceptives in Guatemala. Important differentials in the use of contraceptives exist according to area of residence and education, with higher use found among urban and more educated women. In all of the countries there is a high reliance on contraceptive methods of high efficacy, such as female sterilization, injections, oral contraceptives, and the IUD.
- Use of contraceptive methods has been increasing steadily over the past decade in each of the countries. In all of the countries, the increase in contraceptive use has been greater in the rural area than in the urban area. The increase in use is principally due to an increase in the use of temporary methods, notably the injection.
- In all of the countries, the principal source of contraception is the Ministry of Health, whose relative participation has been increasing over the past decade. The role of the private family planning associations as a source of contraception has been declining since the early 1990s. Pharmacies and other private sources are important suppliers in Guatemala, Honduras, and Nicaragua.
- A substantial proportion (43 to 72 percent) of fecund, married women not currently using a contraceptive method want to use contraceptives sometime in the future. The three methods most preferred by these women are the injection, female sterilization, and the pill.

CHAPTER 5

Sexual and Contraceptive Behavior of Young Adults

The reproductive health knowledge of young adults and their sexual and contraceptive behavior have important implications for the future of a population's health and well being. Worldwide, it has been estimated that almost half of new HIV infections and one-third of all new sexually transmitted infections occur to people younger than 25 years of age. In addition, an unintended pregnancy can disrupt a young girl's life by interrupting further schooling and training. Parents, teachers, and health professionals are often unable to communicate effectively with young adults about their sexual and reproductive lives. In many countries, young people are seldom prepared with the information, skills, and resources needed to make a healthy transition to adulthood. Inadequate programs and lack of sex education can leave youth at the mercy of mass media and misinformation from peers.

A young adult module for women and men aged 15–24 was included in the last survey conducted in El Salvador, Guatemala, and Honduras. The young adult modules included questions related to first sexual experience and current sexual behavior, including contraceptive use. The female questionnaires also included questions on the educational status of women at the time of their first pregnancy, and whether their pregnancy disrupted their studies.

In each of the surveys, first sexual experience is classified as premarital or marital. If the respondent's first sexual partner was their husband, the first sexual experience was classified as marital. Sexual experience was

classified as premarital if the first sexual experience occurred with someone other than their husband or if it occurred at least one month prior to the date of marriage.

First Sexual Experience

The reported sexual experience of young adult women and men is shown in Table 5.1. Focusing first on the women, at least half of the women aged 15–24 in El Salvador and Honduras reported sexual experience, compared to 43.0 percent in Guatemala. Of those with sexual experience in Guatemala and Honduras, 27.2 and 28.6 percent reported marital experience, respectively, while 15.8 and 27.2 percent reported premarital experience. The situation in El Salvador is different in that the majority of the women reported premarital experience (39.3 percent premarital vs. 12.4 percent marital). As may be expected, sexual experience increases as age increases, with marked differences between adolescents (15–19 years) and 20–24-year-olds (Graph 5.1).

Among the men, from 58.0 percent (Guatemala) to 66.4 percent (El Salvador) reported sexual experience. In all three of the countries, almost

all of the men who reported sexual experience have had premarital sex. Like the women, sexual experience increases as age increases, with marked differences between adolescents (15–19 years) and 20–24-year-olds (Graph 5.1).

In Guatemala and Honduras, rural women were more likely to be sexually experienced than their urban counterparts, while the opposite was the case in El Salvador, although the urban/rural differential is small (Table 5.2). Also, in Guatemala and Honduras, rural women were more likely to be married at first sexual experience, while in El Salvador they were more likely to be single. In El Salvador and Honduras, urban women tended to report that their first sexual experience was premarital, while in Guatemala near equal percentages of urban women reported marital and premarital experiences (circa 19 percent).

With respect to the men, in all three countries urban men were more likely to be sexually experienced than men living in the rural area. Regardless of area of residence, the vast majority of the men with sexual experience reported that their first sexual experience was premarital.

Table 5.1
Reported Sexual Experience, by Marital Status at Time of First Sexual Experience, According to Current Age: Women and Men Aged 15–24 (Most Recent Survey)

Country/ Age	Year of Survey	Females				Males			
		No Sexual Experience	Marital	Premarital	Total	No Sexual Experience	Marital	Premarital	Total
El Salvador	2002/03								
Total		48.3	12.4	39.3	100.0	33.6	1.4	65.0	100.0
15–19		67.5	7.5	25.1	100.0	49.7	0.0	50.3	100.0
20–24		25.6	18.2	56.2	100.0	13.5	3.2	83.3	100.0
Guatemala	2002								
Total		57.0	27.2	15.8	100.0	42.0	5.4	52.6	100.0
15–19		77.0	14.2	8.8	100.0	59.8	2.4	37.8	100.0
20–24		32.6	43.1	24.4	100.0	11.3	10.6	78.2	100.0
Honduras	2001								
Total		44.2	28.6	27.2	100.0	35.3	2.2	62.5	100.0
15–19		61.9	19.9	18.2	100.0	51.3	0.6	48.1	100.0
20–24		22.9	39.0	38.1	100.0	15.6	4.1	80.3	100.0

Graph 5.1
Percentage of Persons With Sexual Experience, by Age and Sex:
Men and Women Aged 15–24
(Most Recent Survey)

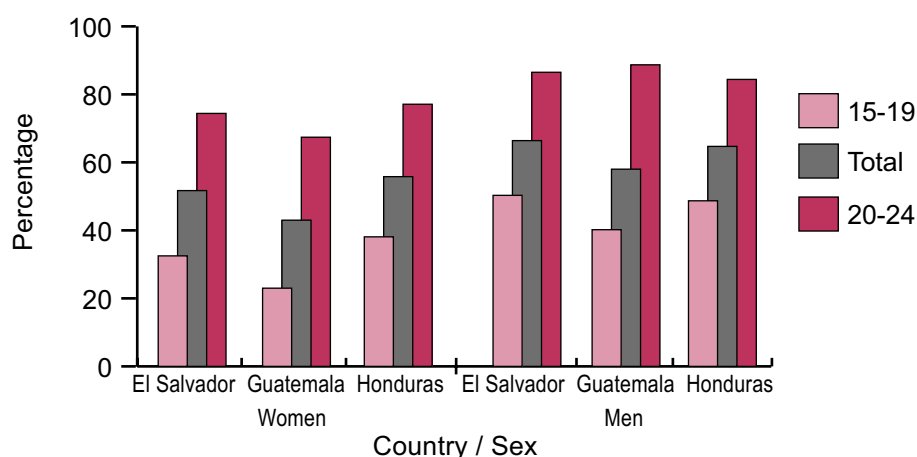


Table 5.2
Reported Sexual Experience, by Marital Status at Time of First Sexual
Experience, According to Area of Residence: Women and Men Aged 15–24
(Most Recent Survey)

Country/ Area	Year of Survey	Females				Males			
		No Sexual Experience	Marital	Premarital	Total	No Sexual Experience	Marital	Premarital	Total
El Salvador	2002/03								
Total		48.3	12.4	39.3	100.0	33.5	1.1	65.4	100.0
Urban		47.8	8.3	43.9	100.0	24.9	0.7	74.4	100.0
Rural		49.0	17.6	33.4	100.0	43.1	1.5	55.4	100.0
Guatemala	2002								
Total		57.0	27.2	15.8	100.0	42.0	5.4	52.6	100.0
Urban		61.9	19.2	18.9	100.0	39.2	3.8	56.9	100.0
Rural		53.6	32.7	13.7	100.0	43.9	6.5	49.6	100.0
Honduras	2001								
Total		44.2	28.6	27.2	100.0	35.3	2.2	62.5	100.0
Urban		49.0	19.6	31.5	100.0	29.5	1.3	69.2	100.0
Rural		39.3	37.9	22.9	100.0	40.3	3.0	56.7	100.0

Table 5.3
Age at First Sexual Experience, According
to Area of Residence: Women Aged 15–24
(Most Recent Survey)

Country/ Area	Year of Survey	Age									Doesn't Remember	Average Age
		<13	13	14	15	16	17	18	19	20–24		
El Salvador	2002/03											
Total		4.0	5.6	12.2	18.3	14.5	12.3	12.5	7.8	12.0	0.8	16.4
Urban		2.8	4.7	10.6	18.6	13.6	12.9	13.8	8.7	13.8	0.5	16.7
Rural		5.5	6.7	14.2	18.0	15.7	11.6	10.7	6.7	9.8	1.3	16.1
Guatemala	2002											
Total		3.0	6.0	13.2	16.6	16.2	15.1	11.5	7.7	10.2	0.5	16.4
Urban		2.3	6.6	11.5	16.0	13.8	13.8	13.0	9.2	13.7	0.2	16.6
Rural		3.4	5.6	14.1	17.0	17.5	15.9	10.7	6.9	8.2	0.6	16.2
Honduras	2001											
Total		3.9	6.0	14.2	17.1	17.2	13.7	12.3	7.0	8.4	0.3	16.2
Urban		3.4	5.9	13.2	14.5	17.8	13.2	13.1	7.7	10.7	0.6	16.4
Rural		4.3	6.0	15.1	19.4	16.6	14.1	11.5	6.4	6.4	0.1	16.0

Age at First Sexual Relation

In Tables 5.3 and 5.4, age at first sexual experience is shown for women and men, respectively. In the last column of each table average age at first sexual relation is also shown.

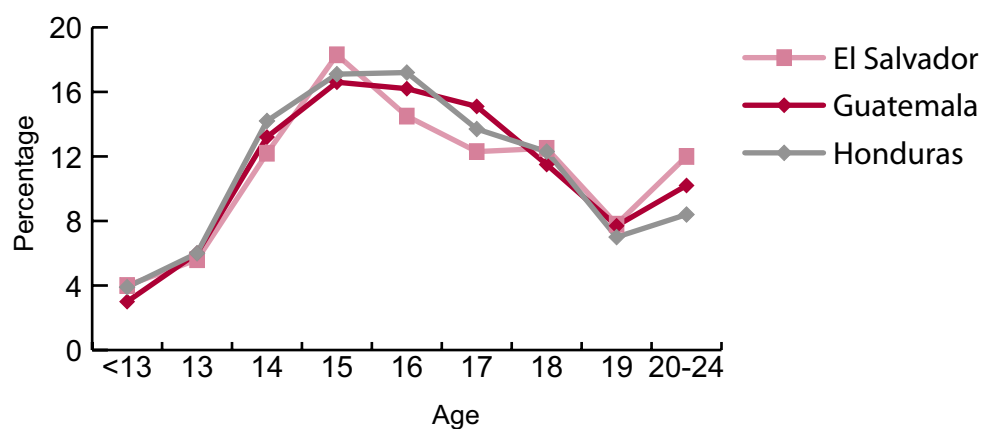
As shown in Table 5.3 and Graph 5.2, the modal age at first sexual experience for women is 15–16 years, as approximately a third of the women have their first relation in this age interval. However, it should be noted that 22 to 24 percent of the

women are sexually experienced before their fifteenth birthday. Thus, by age 16, 54.6 percent (El Salvador) to 58.4 percent (Honduras) of the women have had their first sexual experience. Age at first sexual experience varies according to area of residence. For example, in Honduras, three-fourths of rural women are sexually experienced before their eighteenth birthday compared to 68.0 percent of urban women. The differential is even greater in Guatemala—73.6 percent vs. 63.9 percent. In sum, in all of the countries, rural women initiate sex earlier than urban women, as indicated by average age at first sexual relation.

Table 5.4
Age at First Sexual Experience, According
to Area of Residence: Men Aged 15–24
(Most Recent Survey)

Country/ Area	Year of Survey	Age									Doesn't Remember	Average Age
		<13	13	14	15	16	17	18	19	20–24		
El Salvador	2002/03											
Total		13.0	9.4	17.7	19.6	15.5	10.8	6.4	2.7	3.8	1.0	15.0
Urban		14.4	8.9	21.7	16.5	16.5	8.9	7.4	2.9	2.4	0.4	14.8
Rural		11.0	10.2	12.0	24.2	14.0	13.6	5.0	2.3	6.0	1.7	15.2
Guatemala	2002											
Total		7.5	10.3	16.1	22.0	14.8	10.2	9.0	6.1	3.8	0.2	15.5
Urban		6.3	8.9	20.2	22.8	10.8	11.7	11.5	6.4	1.5	0.0	15.4
Rural		8.4	11.3	13.0	21.4	17.8	9.1	7.2	5.8	5.6	0.3	15.5
Honduras	2001											
Total		9.4	8.9	16.5	20.5	18.2	13.1	6.2	3.6	2.2	1.4	15.1
Urban		11.3	10.5	15.8	19.9	18.2	12.8	6.5	2.2	1.2	1.5	15.0
Rural		7.5	7.2	17.2	21.1	18.2	13.4	5.8	5.0	3.2	1.3	15.3

Graph 5.2
Age at First Sexual Experience: Women Aged 15–24

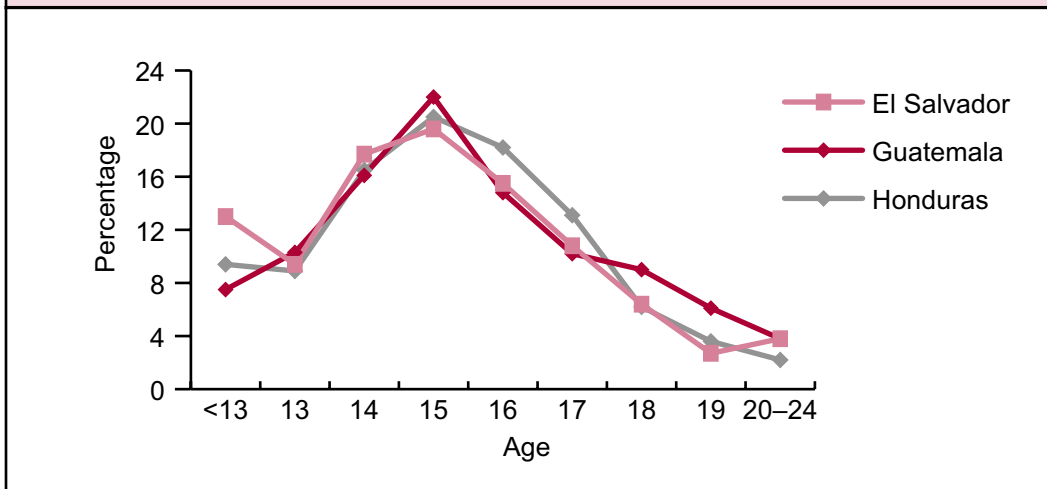


The modal age at first sexual experience among men is 15 (Table 5.4 and Graph 5.3), but when disaggregated by area of residence some interesting variations emerge. In El Salvador the modal age in urban areas is 14, and initial age at first sex is highly concentrated at ages 14–15 in urban areas of Guatemala. While 21.8 to 24.0 percent of the women are sexually experienced before their fifteenth birthday, approximately a third of the men are. Of sexually experienced young men, three-quarters in El Salvador, 73.5 percent in Honduras, and 70.7 percent in Guatemala have had intercourse by age 16. Average age at first sexual experience does not vary substantially according to area of residence. In all of the countries, first sexual intercourse occurs soon after the fifteenth birthday, one year less than among the women.

It is worthwhile mentioning, although the supporting data are not shown in this report,

that the age of the first sexual partner of both adolescent women and men is considerably higher than their own age at first sexual experience. For example, among Honduran women who were less than 15 years of age at first intercourse, 47.3 percent of their first male partners were 20 or more years old. The corresponding percentages for El Salvador and Guatemala are 34.6 and 38.8 percent respectively. And, among Honduran men who were 13–14 years of age at first intercourse, 23.0 percent of their first female partners were 18 or more years old. These age differences suggest that the reproductive health of some women and men may have been in danger at their first sexual encounter, and that they may have had little to say on whether or not sexual activity should be initiated. In addition, it is reasonable to assume that their first sexual partners were sexually experienced.

Graph 5.3
Age at First Sexual Experience: Men Aged 15–24



Use of Contraceptives at First Sexual Intercourse

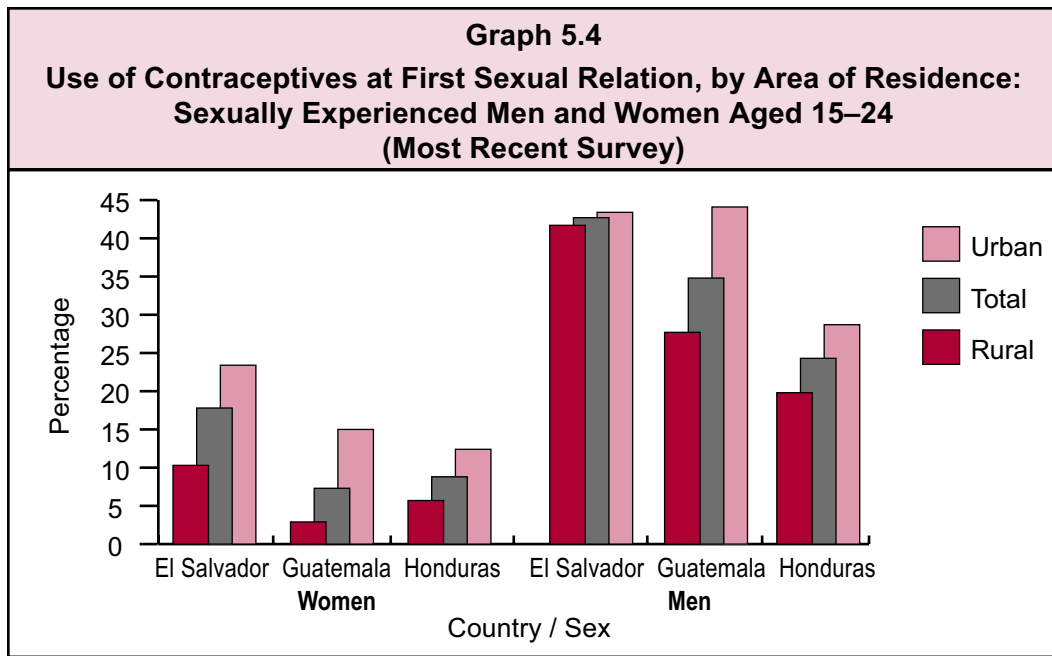
Sexually experienced respondents were asked if they or their partner used any contraceptive method during their first sexual encounter. Table 5.5 shows that the highest rate of contraceptive use at the time of first intercourse among women was in El Salvador (17.8 percent). Lower rates were found in Honduras (8.8 percent) and Guatemala (7.3 percent). In all three countries, a higher proportion of women reporting premarital sex used a contraceptive method than women reporting marital sex, ranging from 10.4 percent in Honduras to 19.6 percent in El Salvador. The probability of using a contraceptive method at the time of first intercourse is much higher in urban areas than in rural areas in all of the countries, regardless of marital status at first sexual encounter. As

noted in the table, contraceptive use is very low in the rural area, particularly in Guatemala and Honduras (see Graph 5.4). In El Salvador and Guatemala the most used method at first intercourse was the condom, while in Honduras it was withdrawal (data not shown).

Since the vast majority of men reported that their first sexual encounter was premarital, only total contraceptive use is shown in Table 5.5. Use at first intercourse varied from a high of 42.7 percent in El Salvador to a low of 24.3 percent in Honduras. In Guatemala and Honduras, use at first intercourse is substantially higher among men living in the urban area than among men living in the rural area, especially in Guatemala. Use in El Salvador does not vary significantly according to area of residence (see Graph 5.4). As expected, the method of contraception most widely used by the men at first intercourse was the condom (data not shown).

Table 5.5
Use of Contraceptives in First Sexual Relation, by
Marital Status at Time of First Sexual Experience, According to
Area of Residence: Women and Men Aged 15–24
(Most Recent Survey)

Country/Area	Year of Survey	Women Total	Marital	Premarital	Men Total
El Salvador	2002/03				
Total		17.8	12.1	19.6	42.7
Urban		23.4	15.1	25.0	43.4
Rural		10.3	10.3	10.3	41.7
Guatemala	2002				
Total		7.3	3.8	13.2	34.8
Urban		15.0	7.8	22.2	44.1
Rural		2.9	2.2	4.6	27.7
Honduras	2001				
Total		8.8	7.4	10.4	24.3
Urban		12.4	12.2	12.6	28.7
Rural		5.7	4.8	7.2	19.8



Reasons for not Using Contraception at First Intercourse

Table 5.6 shows the primary reasons for not using contraception among sexually experienced respondents who did not use contraception at first sexual intercourse.

A large share of married, female respondents did not use contraception because they “wanted to become pregnant.” This response ranked highest in Guatemala (with 41.5 percent of respondents) and in El Salvador (with 37.7 percent), and in second place in Honduras (22.3 percent). In Honduras, the principal reason was they “didn’t know any contraceptive method” at the time of first intercourse (27.5 percent), and was the second ranked reason in Guatemala (with 35.9 percent) and El Salvador (20.0 percent).

Common reasons unmarried women gave for not using contraception at first sexual intercourse was that they “did not expect to have sexual relations at that moment” and “they didn’t know any contraceptive method.” The former was the principal reason given in El Salvador and Honduras with 45.5 and 31.4 percent of the

respondents giving this reason respectively, and ranked second in Guatemala with 22.7 percent. “Not knowing any contraceptive methods” was the principal reason given in Guatemala among a third of respondents and ranked second in Honduras and El Salvador. It should be noted that 15.8 percent of unmarried women in Guatemala responded that they “wanted to become pregnant” as the reason for not using a contraceptive method. This reason was also cited by 7.2 and 6.6 percent of the women living in Honduras and El Salvador, respectively.

Among El Salvadoran and Honduran men whose first sexual relation was premarital, the most common reason for not using contraception was “they did not expect to have sexual relations at that moment.” This reason ranked second in Guatemala. Like young unmarried women the most common reason given by Guatemalan men was they “didn’t know any contraceptive method.” (46.9 percent). This reason ranked second in El Salvador and third in Honduras (29.8 and 25.6 percent respectively). In Honduras, the second most mentioned reason was that it “was the first time had sexual relations,” implying that the respondent and/or his partner believed that it is not possible for a woman to become pregnant the first time she has sex.

Table 5.6
Primary Reasons For Not Using Contraceptives During First Sexual Experience: Women and Men Aged 15–24 Whose First Sexual Relation Was Marital Or Premarital (Most Recent Survey)

	El Salvador 2002/03	Guatemala 2002	Honduras 2001
Women			
Reason—Marital			
Wanted to become pregnant	37.7	41.5	22.3
Didn't know any contraceptive method	20.0	35.9	27.5
Partner opposed the use of contraceptives	10.3	4.2	6.1
Did not like to use contraceptives	6.0	7.4	11.9
Contraceptives are dangerous to your health	5.8	0.6	na
Didn't expect to have sexual relations at that moment	5.3	0.3	4.1
Was the first time had sexual relations	na	na	11.1
Reason—Premarital			
Didn't expect to have sexual relations at that moment	45.5	22.7	31.4
Didn't know any contraceptive method	18.7	33.7	23.5
Wanted to become pregnant	6.6	15.8	7.2
Partner opposed the use of contraceptives	6.3	2.7	4.5
Did not like to use contraceptives	2.9	7.7	8.7
Was the first time had sexual relations	na	na	8.0
Men			
Reason—Premarital			
Didn't expect to have sexual relations in that moment	37.7	23.1	32.4
Didn't know any contraceptive method	29.8	46.9	25.6
Had confidence in my partner	5.3	na	1.1
Didn't have contraceptives in that moment	4.8	3.9	na
Did not like to use contraceptives	4.0	10.3	na
Was the first time had sexual relations	na	7.1	27.1
na: Not available.			

Recent Sexual Activity

Tables 5.7 and 5.8 show the percentage of sexually experienced respondents aged 15–24 who had sexual relations during the 30 days prior to interview, and the percentage that used a contraceptive method. Focusing first on the women, from 61.6 percent (El Salvador) to 69.0 percent (Guatemala) had sexual intercourse during the 30 days prior to interview (Table 5.7). As expected, the majority of married women in each country reported sexual activity (over 80 percent). Of the previously married women

(separated, divorced or widowed women), from 12.2 percent (Guatemala) to 20.2 percent (Honduras) reported current sexual activity. Of those single women with sexual experience, from 20.1 percent (Guatemala) to 27.8 percent (El Salvador) reported having sex at least once in the 30 days prior to interview.

Use of contraceptives among women with sexual relations in the past month varied from country to country, ranging from a low of 36.0 percent in Guatemala to a high of 60.8 percent in El Salvador. Honduras was not far behind

Table 5.7
Sexual Activity and Use of Contraceptives During the 30 Days Prior to Interview, According to Current Marital Status: Women Aged 15–24 With Sexual Experience (Most Recent Survey)

Country/Marital Status	Year of Survey	Had Relations	Used Contraceptives
El Salvador	2002/03		
Total		61.6	60.8
Married		80.9	63.9
Previously Married		16.7	47.3
Single		27.8	50.4
Guatemala	2002		
Total		69.0	36.0
Married		80.2	35.4
Previously Married		12.2	*
Single		20.1	*
Honduras	2001		
Total		66.5	58.4
Married		83.4	58.4
Previously Married		20.2	62.4
Single		24.6	53.7
na: Not available.			
* Less than 25 cases.			

Table 5.8 Sexual Activity and Use of Contraceptives During the 30 Days Prior to Interview, According to Current Marital Status: Men Aged 15–24 With Sexual Experience (Most Recent Survey)			
Country/Marital Status	Year of Survey	Had Relations	Used Contraceptives
El Salvador	2002/03		
Total		45.3	62.1
Ever-Married		73.9	62.6
Single		33.8	61.7
Guatemala	2002		
Total		54.8	42.7
Ever-Married		90.2	37.1
Single		36.0	53.5
Honduras	2001		
Total		42.3	61.9
Ever-Married		76.9	54.5
Single		25.3	72.1

El Salvador with 58.4 percent of the women reporting contraceptive use. It should be noted that at least 50 percent of single women living in El Salvador and Honduras used a contraceptive method, while about 50 percent in each country did not. Comparing Table 5.7 with Table 5.5 it is obvious that a much higher percentage of sexually active young adult women were currently using a contraceptive method than at time of their first sexual experience.

Among the men, from 42.3 percent (Honduras) to 54.8 percent (Guatemala) reported sexual

activity during the 30 days prior to interview (Table 5.8). In all three populations, there was greater reported sexual activity among ever-married men compared to single men, which ranged from 25.3 percent in Honduras to 36.0 percent in Guatemala. Almost an equal percentage of men (62 percent) living in El Salvador and Honduras used a contraceptive method during the 30 days prior to interview, while only 42.7 percent of Guatemalan men reported use. Among single men, contraceptive use ranged from 53.5 percent in Guatemala to 72.1 percent in Honduras.

First Pregnancy

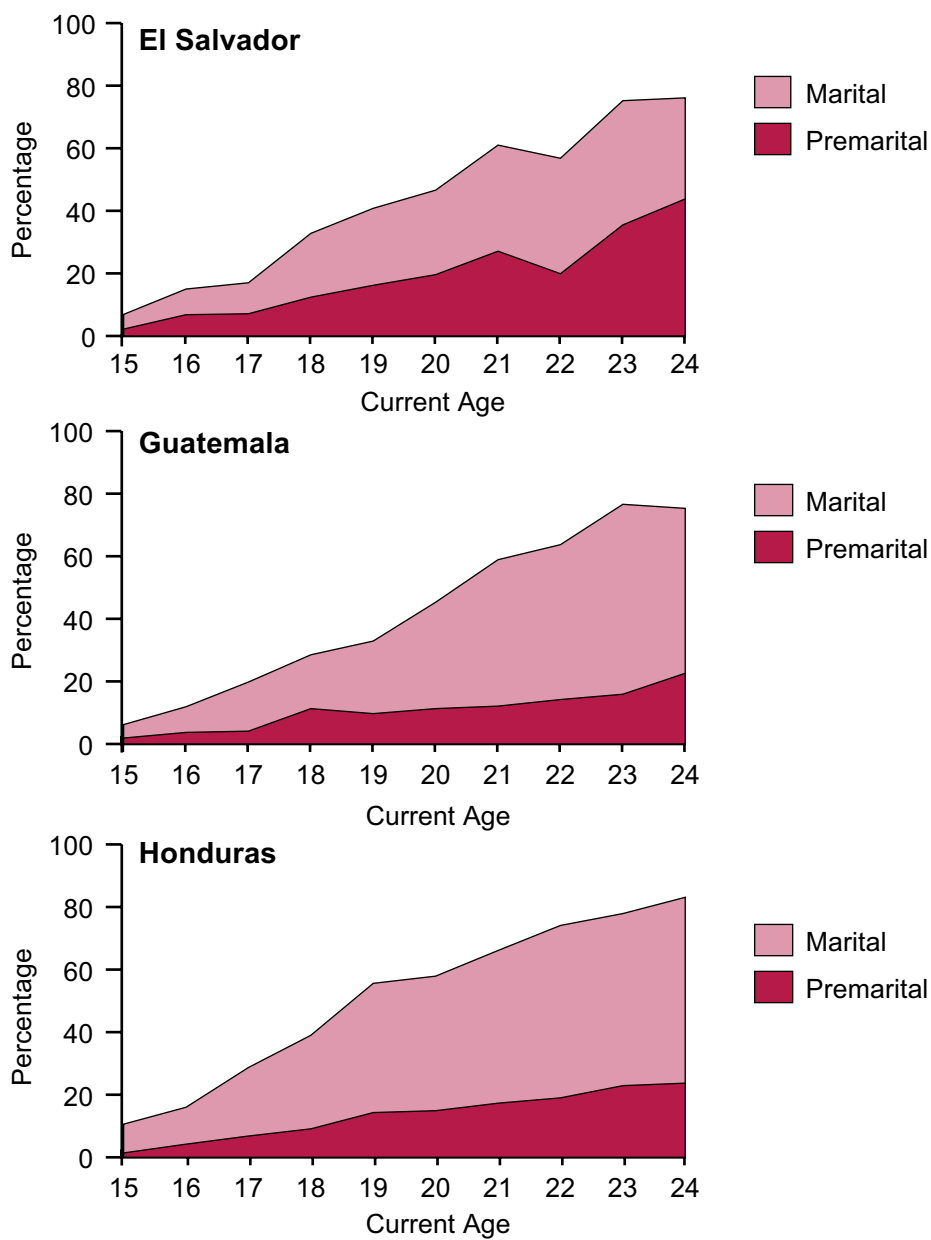
Table 5.9 and Graph 5.5 show the percentage of all women aged 15–24 who have ever been pregnant in their life, by current age. In general, 48.3 percent of women living in Honduras reported having ever been pregnant compared to 40.9 percent in El Salvador and 38.5 percent in Guatemala. As expected, a higher proportion of pregnancies were conceived after marriage than before marriage. In Honduras, by the time women are 17 years of age, 28.7 percent have been pregnant, and by the time they are 20

years of age, 57.8 percent. The corresponding percentages for El Salvador and Guatemala are 17.0 and 46.7 percent, and 19.8 and 45.3 percent, respectively. At all ages, the percentage of pregnancies conceived after marriage is higher than those conceived before marriage. However, it should be noted that from 11.3 percent (Guatemala) to 19.6 percent (El Salvador) of the women aged 20 years reported that their first pregnancy was conceived before marriage. In general, the percentage of first pregnancies that were conceived before marriage increases as the age of the respondent increases.

Table 5.9
Percent of Women Who Have Ever Been Pregnant, According to
Marital Status at Time of First Pregnancy, By Actual Age:
Women Aged 15–24 (Most Recent Survey)

Country/ Marital Status	Year of Survey	Total	Current Age									
			15	16	17	18	19	20	21	22	23	24
El Salvador	2002/03											
Total		40.9	6.9	14.9	17.0	32.7	40.8	46.7	61.1	56.8	75.3	76.1
Marital		22.8	4.7	8.2	9.9	20.4	24.6	27.0	33.9	36.9	39.7	32.3
Premarital		18.1	2.2	6.8	7.1	12.4	16.2	19.6	27.1	19.9	35.5	43.8
Guatemala	2002											
Total		38.5	6.2	11.9	19.8	28.5	32.9	45.3	58.9	63.7	76.6	75.3
Marital		28.7	4.3	8.2	15.7	17.2	23.2	34.0	46.8	49.5	60.7	52.7
Premarital		9.8	1.9	3.7	4.1	11.3	9.7	11.3	12.1	14.2	15.9	22.6
Honduras	2001											
Total		48.3	10.7	16.0	28.7	39.0	55.6	57.8	66.1	74.1	77.9	83.1
Marital		35.8	9.2	11.8	21.9	29.9	41.3	43.0	48.8	55.1	55.0	59.4
Premarital		12.6	1.4	4.2	6.8	9.1	14.3	14.9	17.3	19.0	22.9	23.7

Graph 5.5
Percentage of Women Who Have Ever Been Pregnant, by Marital Status
at Time of First Pregnancy, for Each Country: Women Aged 15–24
(Most Recent Survey)



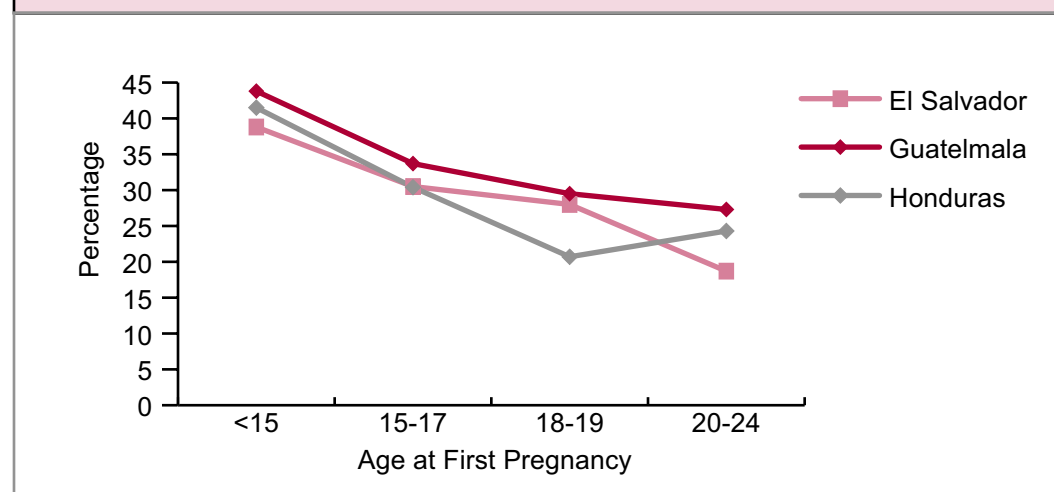
Of the women who have ever been pregnant, a substantial proportion did not believe that they could become pregnant at the time they first became pregnant, ranging from 28.2 percent in Honduras to 32.6 percent in Guatemala (Table 5.10). In all three countries, the percentage who

believed that they could not become pregnant decreases as age at first pregnancy increases (Graph 5.6). Nonetheless, it is interesting that from 18.7 to 27.3 percent of the women aged 20–24 at first pregnancy did not believe that they could become pregnant when they did.

Table 5.10
Percentage of Women Who Did Not Believe They Could Become Pregnant When They Became Pregnant the First Time, According to Age at First Pregnancy: Ever-pregnant Women Aged 15–24 (Most Recent Survey)

Age at First Pregnancy	El Salvador 2002/03	Guatemala 2002	Honduras 2001
Total	28.5	32.6	28.2
< 15	38.8	43.8	41.5
15–17	30.5	33.7	30.4
18–19	28.0	29.5	20.7
20–24	18.7	27.3	24.3

Graph 5.6
Percentage of Women Who did Not Believe They Could Become Pregnant When They Did: Ever-pregnant Women Aged 15–24



The reason most frequently mentioned by Salvadoran women for believing that they could not become pregnant the first time was that “I had sexual relations infrequently,” while the principal reasons in Guatemala and Honduras were “it was the first time to have sexual relations” and “I didn’t believe that I was old enough to become pregnant,” respectively (Table 5.11). From 7.4 percent (Honduras) to 19.3 percent (El Salvador) of the women reported that their “partner said that I would

not become pregnant.” Also, 13.8 and 15.5 percent of women in El Salvador and Honduras, respectively, reported that “I believed I was not in my fertile period,” while 13.3 percent of Guatemalan women reported that “I didn’t know when my fertile period was.”

From 27.3 percent (Guatemala) to 40.8 percent (El Salvador) of first pregnancies were not planned (Table 5.12). In general, the proportion of first pregnancies that were not planned decreases as age at first pregnancy increases.

Table 5.11 Primary Reasons for Believing That Could Not Become Pregnant the First Time: Ever-pregnant Women Aged 15–24 (Most Recent Survey)			
Reasons	El Salvador 2002/03	Guatemala 2002	Honduras 2001
Had sexual relations infrequently	25.3	9.7	5.5
Partner said that I would not become pregnant	19.3	11.8	7.4
Was the first time to have sexual relations	18.2	30.8	16.1
Believed I was not in my fertile period	13.8	na	15.5
Didn't believe I was old enough to become pregnant	10.3	16.4	32.2
Previously had relations without becoming pregnant	na	na	7.8
Didn't know when my fertile period was	na	13.3	na
na: Not available.			

Table 5.12 Percentage of Women Who Did Not Plan Their First Pregnancy, According to Age at First Pregnancy: Women Aged 15–24 (Most Recent Survey)			
Age at First Pregnancy	El Salvador 2002/03	Guatemala 2002	Honduras 2001
Total	40.8	27.3	35.7
< 15	55.0	32.3	45.4
15–17	44.8	26.4	35.6
18–19	40.9	25.9	35.3
20–24	23.6	27.5	27.9

This relationship is strongest in El Salvador, followed by Honduras, and is relatively small in Guatemala (Graph 5.7). It is interesting to note that a surprising 45.0 to 67.7 percent of women, who were less than 15 years of age at first pregnancy, actually planned their first pregnancy. In other words, these pregnancies were wanted by these adolescent women.

In El Salvador, 25.2 percent of the women were students at the time they first became pregnant, while only 11.9 and 12.8 percent of women living in Guatemala and Honduras, respectively, were students (Table 5.13). Only 9.8 percent of Guatemalan women who were less than 15 years of age at time of first pregnancy were students, proportion that increases to

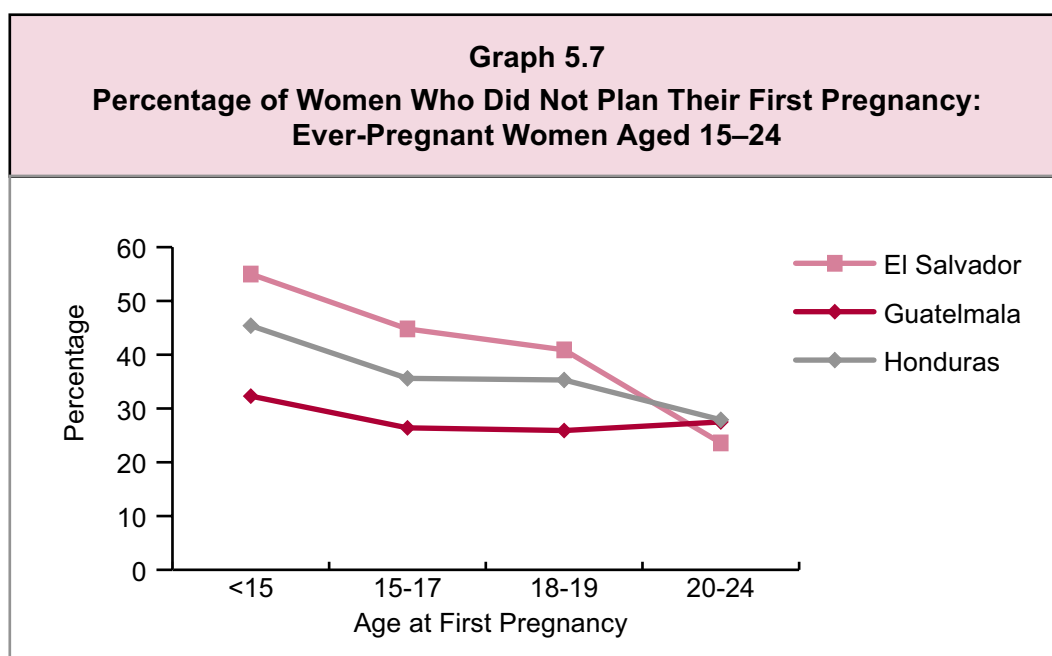


Table 5.13
**Percentage of Women Who Were
Students When They First Became Pregnant, According
to Age at First Pregnancy: Women Aged 15–24
(Most Recent Survey)**

Age at First Pregnancy	El Salvador 2002/03	Guatemala 2002	Honduras 2001
Total	25.2	11.9	12.8
< 15	32.6	9.8	17.3
15–17	30.2	12.0	12.7
18–19	22.4	13.3	11.4
20–24	12.4	11.6	12.0

17.3 percent in Honduras and to 32.6 percent in El Salvador. Similarly, from 12.0 percent (Guatemala) to 30.2 percent (El Salvador) of women aged 15–17 were in school at the time of their first pregnancy. These findings suggest that the only career alternative available to these women at the time of their first pregnancy was “motherhood.”

Approximately 37 to 39 percent of women who were students at the time of their first pregnancy

resumed their studies after their pregnancy ended (Table 5.14). In Guatemala, 39.2 percent resumed their studies, while 38.5 and 37.3 percent of the women in Honduras and El Salvador returned to the classroom, respectively. As shown in the table, the probability of returning to the classroom after completing the first pregnancy increases substantially as grade level at time of first pregnancy increases. The percent returning to school among women in primary education is below 20 percent.

Table 5.14
Percentage of Women Who Resumed Their
Studies After They Completed Their First Pregnancy,
According to Grade Level When Suspended Their
Studies: Women Aged 15–24
(Most Recent Survey)

Country/ Education	Year of Survey	Percentage
El Salvador	2002/03	
Total		37.3
1–6		15.4
7+		41.0
Guatemala	2002	
Total		39.2
Primary		9.5
Secondary+		43.4
Honduras	2001	
Total		38.5
0–6		15.0
7+		44.9

Sex Education

The threat of increasing rates of HIV/AIDS infections, increased rates of premarital intercourse and other related changes in sexual and reproductive health behaviors, and increased media sexual imagery have raised questions about the coverage and quality of sexuality education in the region. In general, efforts to educate young adults on sexuality, pregnancy, and sexual health have not been standardized, lacked national coverage, and often were limited in scope and time frame.

Table 5.15 shows the percentage of all women and men aged 15–24 who have been exposed to information from talks or courses on various topics related to sexuality and reproductive health. For example, only 28.5 percent of women in Guatemala have received information about menstruation, compared to 42.4 percent of Honduran woman and 84.7 percent of El Salvadoran women. Similarly, the percentage of women who have received information about contraceptive methods ranges from a low of 25.8 percent in Guatemala to a high of 76.9 percent in El Salvador. In El Salvador the

Table 5.15
Percentage of All Women and Men Who Have Received Information
From Talks Or Courses on Various Topics Related to Sexuality and
Reproductive Health: Women and Men Aged 15–24
(Most Recent Survey)

Women Topic	El Salvador 2002/03	Guatemala 2002	Honduras 2001
Menstruation	84.7	28.5	42.4
HIV/AIDS	76.4	28.0	42.1
Sexual relations	75.3	28.0	38.2
Pregnancy and birth	77.5	25.9	37.9
Reproductive organs	68.4	26.8	37.8
Physical changes in the body	68.5	25.6	36.9
Contraceptive methods	76.9	25.8	34.2
Men Topic			
Menstruation	68.9	28.7	19.0
HIV/AIDS	62.0	36.1	28.9
Sexual relations	68.9	34.4	25.6
Pregnancy and birth	67.9	27.3	20.4
Reproductive organs	75.1	32.0	21.7
Physical changes in the body	66.5	31.5	19.3
Contraceptive methods	57.9	30.7	18.2

majority of respondents interviewed indicate that information about reproductive health and contraception was learned at school (data not shown). In general, the probability of having been exposed to the various topics shown in the table is lowest in Guatemala and highest in El Salvador.

With the exception of Guatemalan men, men have had less exposure to the individual topics shown in the table than the women have. Using menstruation again as an example, only 19.0 percent of Honduran men reported having ever received information on this topic, compared to 42.4 percent of Honduran women. Perhaps this is why some men told their sexual partners that they could not become pregnant (see Table 5.11). In Honduras, more women have been exposed to information on HIV/AIDS than the men, which is an interesting finding given the number of talks that have been presented to both sexes on this subject in that country.

In all three countries, there are indications that a greater proportion of women and men aged 15–19 have been exposed to sexual and reproductive health information than women and men aged 20–24 (data not shown), indicating that health promotion in schools has been increasing in recent years.

Summary of Findings

- At least one-half of young adult women in El Salvador and Honduras reported sexual experience compared with 43.0 percent of women in Guatemala. The percentage of men aged 15–24 who were sexually experienced increases from 58.0 percent in Guatemala, to 64.7 percent in Honduras, and to 66.4 percent in El Salvador.
- More young adult women living in Guatemala and Honduras who reported sexual experience have had marital sexual intercourse than premarital intercourse, while in El Salvador the opposite is the case. The vast majority of young adult men in all three countries reported premarital sexual intercourse.
- The modal age at first sexual experience for both women and men in all three countries is about 15–16 years. Among young adult women who are sexually experienced, the average age at first intercourse ranges from 16.2 to 16.4 years, while among men it ranges from 15.0 to 15.5 years.
- In all of the countries, a higher proportion of women with premarital sexual experience reported that they or their partner used contraception at sexual debut than did women whose first sexual experience was at the time of marriage. For both women and men, use of a contraceptive method at time of first intercourse was substantially higher in the urban area.
- The two principal reasons for not using a contraceptive method among women whose first sexual relation was premarital were “didn’t expect to have sexual relations at that moment” and “didn’t know any contraceptive method.” These are the same reasons given by men in El Salvador and Guatemala, while in Honduras the second most frequently mentioned reason was “it was the first time had sex.”
- Of the women and men who were sexually active during the 30 days prior to interview, a much higher proportion used contraception than at the time of their sexual debut.
- In general, 48.3 percent of women aged 15–24 living in Honduras reported having ever been pregnant compared to 40.9 percent in El Salvador and 38.5 percent in Guatemala. In Honduras, by the time women are 20 years of age, 57.8 percent have been pregnant. The corresponding percentages for El Salvador and Guatemala are 46.7 percent and 45.3 percent, respectively. At all ages, the percentage of pregnancies conceived after marriage is higher than those conceived before marriage.
- Of the women who have ever been pregnant, a substantial proportion did not believe that they could become pregnant at the time

they first became pregnant, ranging from 28 percent in Honduras and El Salvador to 32.6 percent in Guatemala.

- A surprising 45.0 to 67.7 percent of women who were less than 15 years of age at first pregnancy actually wanted their first pregnancy.
- The probability of young adults receiving information on various topics related to sexuality and reproductive health from talks or courses on sexual education is particularly low in Guatemala and Honduras. It appears that the most important source of information on sexual matters for many young people is friends and peers.

CHAPTER 6



HIV/AIDS

The first HIV/AIDS cases in El Salvador and Guatemala were registered in 1984, while the first cases in Honduras and Nicaragua were recorded in 1985 and 1987, respectively. Since then, the number of persons infected with HIV has increased at an accelerated pace, particularly in Honduras, Guatemala, and El Salvador. As of year 2002, Honduras had officially reported the most cases (17,199), followed by Guatemala (4,923), El Salvador (4,278), and Nicaragua (997). In all of the countries, the main transmission route of HIV is by sexual contact, principally heterosexual. Also, in all of the countries, men account for the majority of the cases, however, the male/female ratio of reported cases is rapidly reaching parity. The men and women most affected by the epidemic are 20–34 years of age. In general, the epidemic is concentrated in the urban and commercial areas of each country. The results of sentinel surveillance studies conducted in each country show that HIV infection is relatively high among commercial sex workers and men who have sex with men.

This chapter examines knowledge of sexually transmitted infections (STIs) and HIV/AIDS, how HIV/AIDS is transmitted, and what can be done to prevent it. Since many questionnaire items were different for Nicaragua, and similar for the other three countries, data and discussion focus on El Salvador, Guatemala, and Honduras. Whenever the Nicaraguan data is comparable it is included in the following presentation.

Knowledge of Gonorrhea and Syphilis

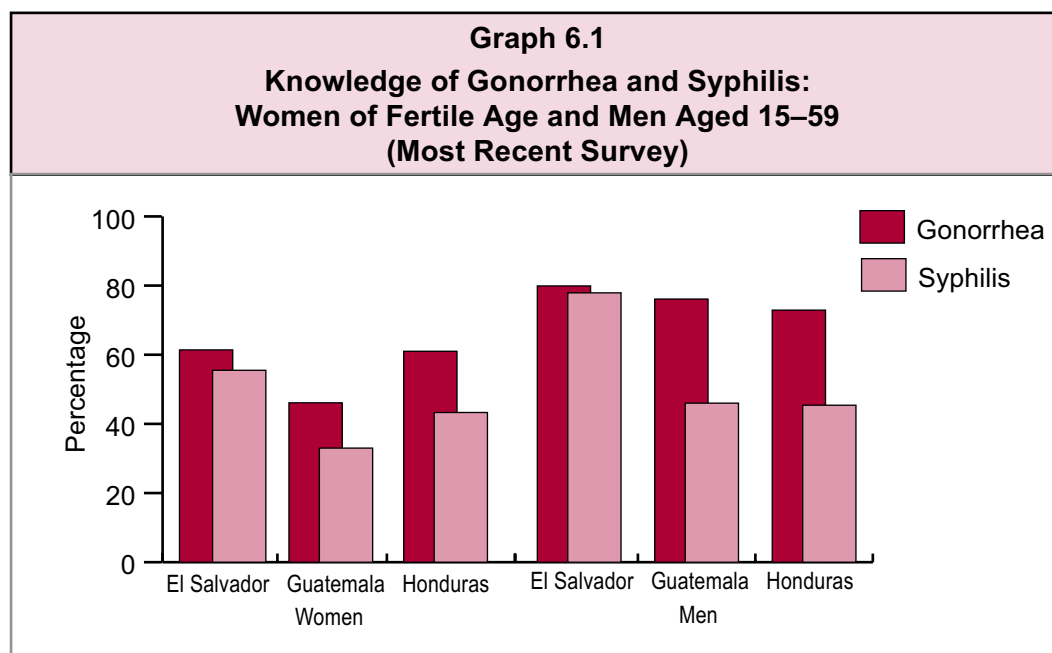
In the most recent surveys in El Salvador, Guatemala, and Honduras, respondents were asked if they had ever heard of a number of specific STIs and of HIV/AIDS. In Nicaragua, respondents were asked if they had ever heard of any STI other than HIV/AIDS, without specifying the various infections. The results of the Nicaragua survey show that 49.9 percent of women aged 15–49 have heard of at least one

STI and that knowledge is higher in urban areas (60.8 percent) than in rural areas (31.1 percent) (data not shown).

Table 6.1 and Graph 6.1 show the percentage of women and men living in El Salvador, Guatemala, and Honduras who have heard of gonorrhea and syphilis. These two classic STIs are the most recognized STIs in each of the countries, indicating that knowledge of the other STIs that were investigated is relatively low. Knowledge of gonorrhea among women

Table 6.1
Knowledge of Gonorrhea and Syphilis, According
to Area of Residence: Women of Fertile Age
and Men Aged 15–59 (Most Recent Survey)

Country/Area	Year of Survey	Women		Men	
		Gonorrhea	Syphilis	Gonorrhea	Syphilis
El Salvador*	2002/03				
Total		61.4	55.5	79.9	77.9
Urban		72.9	66.7	88.5	87.6
Rural		46.4	40.8	71.9	69.0
Guatemala*	2002				
Total		46.1	33.0	76.1	46.0
Urban		61.2	47.1	85.9	61.2
Rural		35.0	22.7	68.9	34.9
Honduras†	2001				
Total		61.0	43.3	72.9	45.4
Urban		74.0	57.3	84.8	60.4
Rural		47.6	28.9	62.9	32.9
* Women aged 15–49.					
† Women aged 15–44.					



ranged from 46.1 percent in Guatemala to approximately 61 percent in El Salvador and Honduras. Similarly, knowledge of syphilis ranged from a low of 33.0 percent in Guatemala to a high of 55.5 percent in El Salvador. In all three of the countries, knowledge of both infections was lowest among women living in the rural area.

As shown in the table and graph, a higher percentage of men have heard of gonorrhea and syphilis compared to the women. Knowledge of both infections is highest and similar in El Salvador, while knowledge of syphilis is substantially lower than gonorrhea in Honduras and Guatemala. As was the case with the women, knowledge of both infections is lowest in the rural area.

Knowledge of HIV/AIDS

In Honduras, almost all women have heard of HIV/AIDS (Table 6.2 and Map 6.1). Knowledge of HIV/AIDS is lower in El Salvador (96.1 percent), Nicaragua (92.8 percent), and in Guatemala (85.6 percent). While knowledge is consistently high in all regions of Honduras the other countries indicate divergent regional

patterns. Nicaragua is the most pronounced with the northwest Pacific coast region showing high levels of knowledge while the Northern Atlantic Autonomous Region (RAAN) showed the lowest. In all four countries, knowledge of this infection is greater in urban areas, which suggests a need to promote awareness in rural areas, especially in Guatemala and Nicaragua.

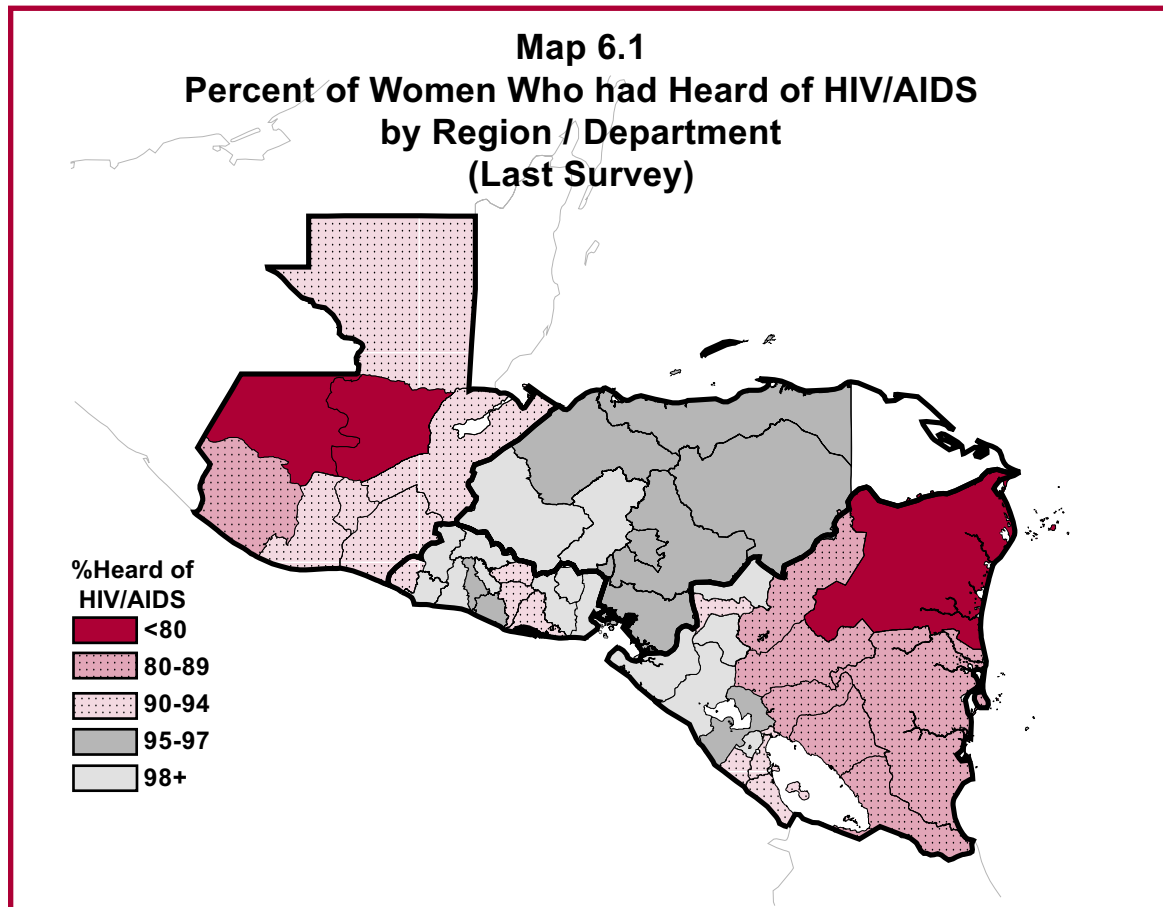
Table 6.2
Knowledge of HIV/AIDS and Percent Who Know That HIV Infections
Can be Asymptomatic, and that no Cure Exists for AIDS, According to Area
of Residence: Women of Fertile Age and Men Aged 15–59 (Most Recent Survey)

Country/ Area	Year of Survey	Women			Men		
		Have Heard of HIV/AIDS	Know HIV Can be Asymptomatic	Know that No Cure Exists for AIDS	Have Heard of HIV/AIDS	Know HIV Can be Asymptomatic	Know that No Cure Exists for AIDS
El Salvador*	2002/03						
Total		96.1	74.4	87.1	98.0	83.7	86.7
Urban		98.1	80.8	88.4	99.7	89.5	89.3
Rural		93.5	66.1	85.4	96.4	78.4	84.3
Guatemala*	2002						
Total		85.6	68.8	84.0	94.8	75.3	82.4
Urban		93.7	75.8	86.5	97.6	80.2	83.4
Rural		79.7	62.7	81.8	92.8	71.6	81.6
Honduras†	2001						
Total		99.2	82.5	86.7	99.6	91.8	87.1
Urban		99.8	87.6	88.8	99.5	95.3	90.0
Rural		98.6	77.3	84.5	99.6	88.8	84.8
Nicaragua*	2001						
Total		92.8	75.0	na	na	na	na
Urban		97.4	84.5	na	na	na	na
Rural		84.7	58.8	na	na	na	na

* Women aged 15–49.

† Women aged 15–44.

na: Not available.



Women who had heard of HIV/AIDS were asked whether they believed that a person could be infected with HIV and be asymptomatic (not show any clinical symptoms of the disease). The knowledge that HIV/AIDS can be asymptomatic is an indication of women's knowledge of HIV/AIDS rather than simple awareness of the

disease. As shown in the third column of Table 6.2, almost 83 percent of women in Honduras know that a person can be asymptomatic and have HIV. In the other countries, between 68.8 percent (Guatemala) and 75.0 percent (Nicaragua) knew this. In all of the countries, there is a wide gap between urban and rural

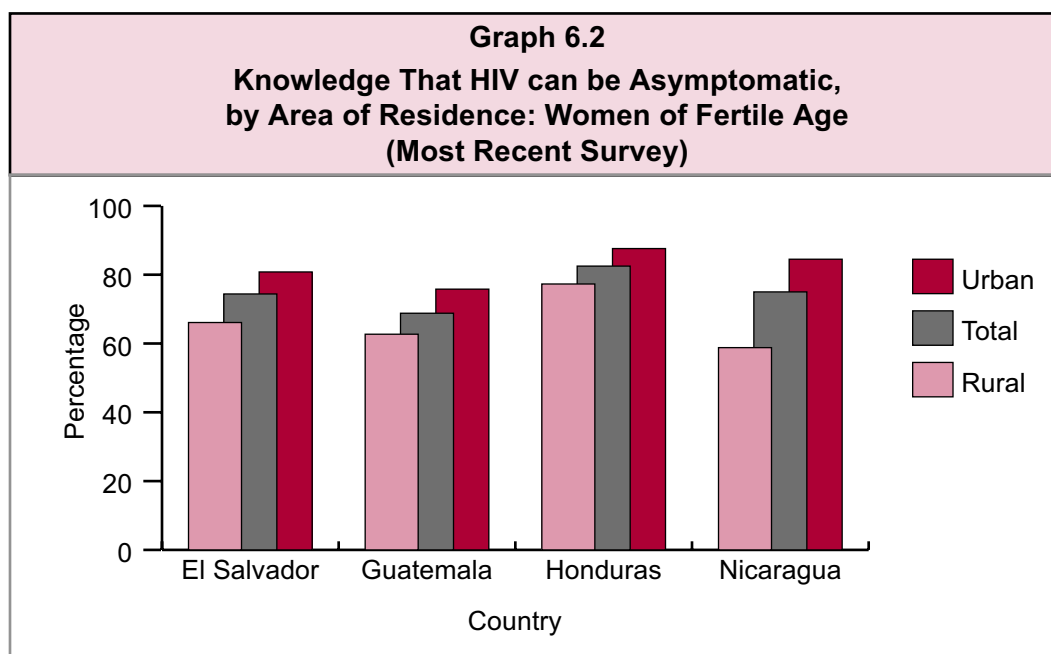
women in the knowledge that HIV can be asymptomatic, particularly in Nicaragua (Graph 6.2 and Map 6.2).

In El Salvador, Guatemala, and Honduras, at least 84.0 percent of the women know that no cure exists for AIDS (fourth column of Table 6.2). Knowledge of this fact is slightly higher among urban women.

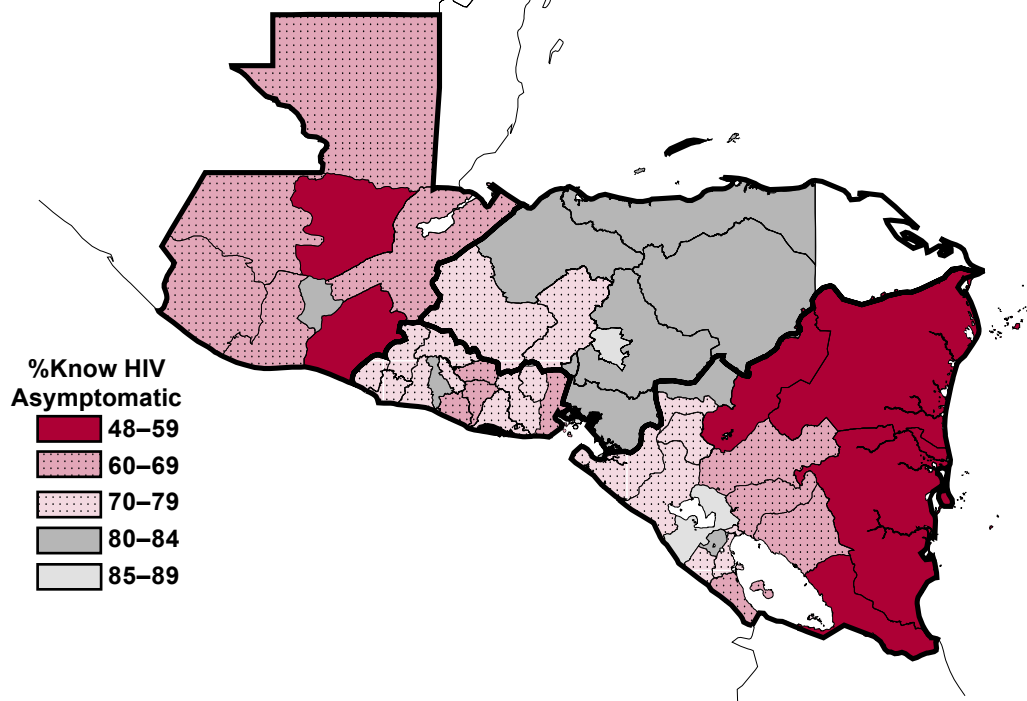
Men also demonstrate high knowledge of HIV/AIDS, with knowledge of HIV/AIDS being almost universal among Honduran men (Table 6.2). Comparing men and women, a greater proportion of Guatemalan men are aware of HIV/AIDS than Guatemalan women, with a differential of about 10 percentage points. As shown in the sixth column of Table 6.2, almost 92 percent of men in Honduras know that a person can be asymptomatic and have HIV (Graph 6.3). In the other countries, between 75.3 percent (Guatemala) and 83.7 percent (El Salvador) knew this. By comparing the fourth column with the seventh column in Table 6.2, it can be seen that almost an equal percentage of women and men in each country know that no cure exists for AIDS.

Means of Preventing the Transmission of HIV/AIDS

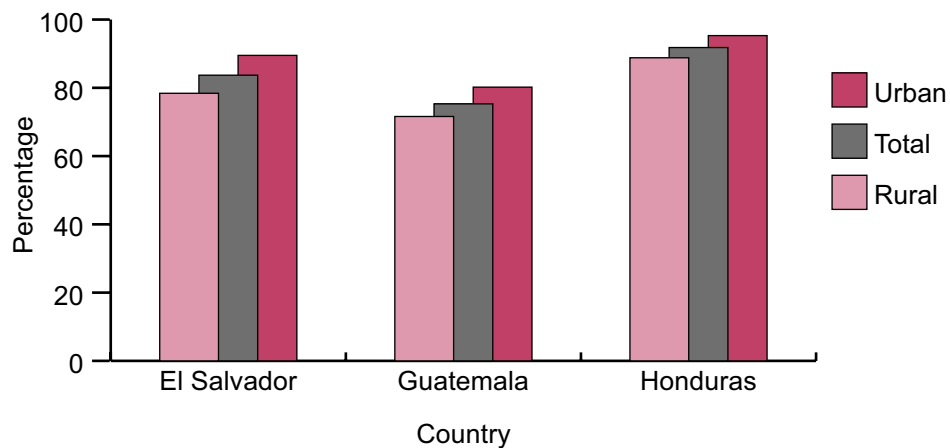
The surveys in El Salvador, Guatemala, and Honduras used a question to ascertain women's and men's knowledge of HIV/AIDS prevention. Essentially, the respondents were asked to mention spontaneously the methods of prevention that they knew. In El Salvador the questionnaire design was adapted to conform with UNAIDS indicator needs and included specific probing on abstinence, monogamy, and condom use in all sexual relations. As a result in El Salvador, the indicators on "spontaneity" of responses may be low because interviewers may have not given respondents enough time to respond. For the purpose of the following comparison the focus is on the percentage of women and men who could mention two or more ways to prevent the transmission of HIV/AIDS spontaneously with some additional mention of probed response rates for El Salvador.



Map 6.2
Percent of Women Who Know That HIV Can be
Asymptomatic by Region / Department
(Last Survey)



Graph 6.3
Knowledge That HIV can be Asymptomatic,
by Area of Residence: Men Aged 15–59
(Most Recent Survey)



As shown in Table 6.3, 44.8 and 41.2 percent of women in Guatemala and Honduras, respectively, could mention two or more ways to prevent the transmission of HIV/AIDS, compared to only 23.1 percent in El Salvador. With probing on specific means of prevention the percent in El Salvador rises to 87.5 percent. The urban/rural differential in El Salvador and Guatemala was 9 and 11 percentage points, respectively, in favor of the urban area, while it was 19 percentage points in Honduras. It should be noted that substantial proportions of women were unable to spontaneously mention any way to prevent the transmission of HIV/AIDS. The lowest percent reported is for Guatemala (11.1 percent) followed by Honduras with 18.1 percent. Forty percent of women in El Salvador did not spontaneously mention any means of prevention, but this drops to 5.8 percent unfamiliar with any means of prevention when probing on specific methods.

A higher percentage of men than women in each country mentioned two or more ways of preventing the transmission of HIV/AIDS. The largest male/female differential was found to be in Honduras—20 percentage points. The percentage of men who mentioned two or more ways to prevent HIV/AIDS was lowest in El Salvador (29.6 percent), followed by Guatemala (47.2 percent), and highest in Honduras (61.2 percent). With probing the percent in El Salvador rises to near 90 percent. As expected, urban men were more likely to mention two or more ways of prevention than rural men. The percent of the men unable to mention any means to prevent the transmission of HIV/AIDS is fairly low, 6.1 and 4.0 percent in Guatemala and Honduras, respectively, but high (23.6 percent) in El Salvador. Again, with probing this percentage drops to 3.2 percent in El Salvador.

Table 6.3 Number of Means Mentioned Spontaneously to Prevent the Transmission of HIV/AIDS, According to Area of Residence: Women of Fertile Age and Men Aged 15–59 (Most Recent Survey)							
Country/ Area	Year of Survey	Women Number of Means			Men Number of Means		
		0	1	2+	0	1	2+
El Salvador*	2002/03						
Total		40.3	36.6	23.1	23.6	46.8	29.6
Urban		33.4	39.4	27.1	16.7	49.2	34.2
Rural		49.2	32.9	17.9	30.0	44.5	25.5
Guatemala*	2002						
Total		11.1	44.1	44.8	6.1	46.6	47.2
Urban		7.3	42.0	50.7	3.5	45.5	51.0
Rural		14.4	46.0	39.7	8.8	47.5	44.3
Honduras†	2001						
Total		18.1	40.7	41.2	4.0	34.8	61.2
Urban		9.0	40.4	50.6	2.1	30.4	67.5
Rural		27.5	40.9	31.6	5.5	38.6	55.9
* Women aged 15–49.							
† Women aged 15–44.							
na: Not available.							

Table 6.4 presents the percentage of women and men who mentioned the primary means of preventing the sexual transmission of HIV/AIDS—abstinence, monogamy, and the consistent and correct use of condoms. As shown in the table, the percentage of women who mentioned abstinence is relatively low in each of the countries, ranging from 13.0 percent in El Salvador to 25.0 percent in Guatemala. Approximately twice as many women mentioned monogamy in each country, while from 27.8 percent (El Salvador) to 54.3 percent (Guatemala) mentioned the use of condoms. With the exception of the use of condoms, the urban/rural differential for the other means of prevention is relatively small in Honduras and Guatemala. In El Salvador the urban/rural differential is large for both monogamy and use of condoms, favoring greater knowledge in urban areas.

A very small percentage of men in each country

spontaneously mentioned abstinence as a way to prevent the transmission of HIV/AIDS. A higher percentage of men in Honduras mentioned monogamy (64.3 percent) than men in Guatemala (40.0 percent) and El Salvador (24.0 percent). More men than women mentioned the consistent and correct use of condoms in Honduras and Guatemala, but the percentage of men who mentioned this means of prevention is surprisingly low in all three countries, ranging from 8.4 in El Salvador to 59.3 in Honduras. It is interesting to note that women, compared to men, are much more likely to mention condom use in El Salvador. Again, when probed, 70.2 percent of women and 62.0 percent of men in El Salvador acknowledged that use of condoms was a means for preventing sexual transmission of HIV/AIDS (data not shown). As was the case with the women, the urban/rural differential for abstinence and monogamy is relatively small in all three countries.

Table 6.4 Percentage of Women and Men Who Mentioned Spontaneously the Primary Means to Prevent the Sexual Transmission of HIV/AIDS, According to Area of Residence: Women of Fertile Age and Men Aged 15–59 (Most Recent Survey)							
Country/ Area	Year of Survey	Women			Men		
		Abstinence	Monogamy	Use Condoms	Abstinence	Monogamy	Use Condoms
El Salvador*	2002/03						
Total		13.0	25.4	27.8	9.4	24.0	8.4
Urban		14.1	29.6	33.7	12.6	29.8	11.1
Rural		11.4	19.9	19.9	6.5	18.6	5.9
Guatemala*	2002						
Total		25.0	42.2	34.7	5.0	40.0	42.2
Urban		23.4	43.7	41.0	7.9	39.7	50.7
Rural		26.8	41.0	29.3	2.9	40.3	35.7
Honduras†	2001						
Total		22.6	43.6	54.3	6.3	64.3	59.3
Urban		23.4	44.8	60.1	8.0	66.3	63.5
Rural		21.7	42.3	47.5	4.8	62.5	55.5
* Women aged 15–49.							
† Women aged 15–44.							

Knowledge and Use of the Test to Detect HIV

A significant proportion of women and men have heard of the test to detect HIV (Table 6.5 and Graph 6.4). Among the women, knowledge of the test is highest in El Salvador (72.1 percent) and lowest in Guatemala (56.7 percent), while among the men, knowledge is highest in Honduras (75.7 percent) and lowest in Guatemala (61.3 percent). Important differences between urban and rural respondents should be noted for both the women and the men.

Table 6.6 shows the percentage of women and men who are aware of the HIV test, according to the educational level of the respondents. For both sexes in each country, knowledge of the test increases as the educational level of the respondents increases. Using Guatemala as an example, while only 30.1 percent of women with no formal education are aware of the test, 95.1 percent of women who have attended a university have knowledge of this test. A similar pattern of knowledge was found for Guatemalan men.

Table 6.5
Knowledge of the Test to Detect HIV,
According to Area of Residence:
Women of Fertile Age and Men Aged
15–59 (Most Recent Survey)

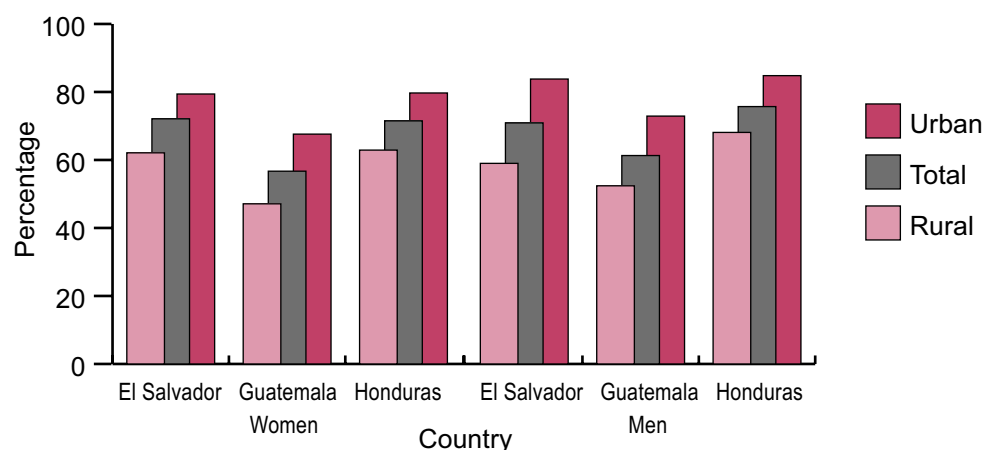
Country/Area	Year of Survey	Women	Men
El Salvador*	2002/03		
Total		72.1	70.9
Urban		79.4	83.8
Rural		62.1	59.0
Guatemala*	2002		
Total		56.7	61.3
Urban		67.6	72.9
Rural		47.1	52.4
Honduras†	2001		
Total		71.5	75.7
Urban		79.7	84.8
Rural		62.9	68.1

* Women aged 15–49.

† Women aged 15–44.

na: Not available.

Graph 6.4
Knowledge of the Test to Detect HIV, by Area of Residence and Sex:
Women of Fertile Age and Men Aged 15–59
(Most Recent Survey)



In general, the percentage of all women and all men who have ever been tested for HIV is relatively small in the countries for which there is data (Table 6.6, Columns 3 and 4). The probability of having ever been tested is similar among women in El Salvador and Honduras at 11.9 percent, while 13.1 percent of men in El Salvador and 17.0 percent in Honduras have been tested. The level of testing among women

in Nicaragua is lower, with an overall percent of 6.6. In all of countries the percentage of women and men who have ever been tested increases as the educational level of the women and men increases. This finding suggests that the self-perceived risk of contracting HIV/AIDS may be higher among more educated women and men than among less educated women and men.

Table 6.6
Knowledge of the Test to Detect HIV, and Ever Been Tested
For HIV/AIDS, According to Education: Women of Fertile
Age and Men Aged 15–59 (Most Recent Survey)

Country/ Education	Year of Survey	Knowledge of Test		Ever Been Tested	
		Women	Men	Women	Men
El Salvador*	2002/03				
Total		69.4	70.9	11.9	13.1
None		50.4	49.0	6.1	4.5
0–3		55.8	56.8	6.5	4.1
4–6		62.6	71.6	7.7	8.9
7–9		73.4	73.9	11.0	12.4
10+		86.2	92.1	20.8	27.3
Guatemala*	2002				
Total		56.7	61.3	na	na
None		30.1	32.0	na	na
Primary		48.9	51.0	na	na
Secondary		79.3	82.0	na	na
Superior		95.1	90.2	na	na
Honduras†	2001				
Total		71.5	75.7	11.9	17.0
None		51.2	57.9	3.1	5.5
1 a 3		61.7	70.3	6.2	9.6
4 a 6		69.6	75.5	8.8	16.0
7+		85.1	89.5	21.6	30.6
Nicaragua	2001				
Total		na	na	6.6	na
None		na	na	1.8	na
1 a 3		na	na	1.9	na
4 a 6		na	na	4.7	na
Secondary		na	na	8.7	na
Superior		na	na	17.6	na
* Women aged 15–49.					
† Women aged 15–44.					
na: Not available.					

Stigma and Discrimination

With the spread of HIV infections throughout the world, there was also a rising wave of stigma associated with the spread. In the early days of the epidemic, there was much misinformation about HIV/AIDS, thus, the stigma linked to it. The social stigma surrounding AIDS was also due in part to its possible etiology of bisexuality or homosexuality, extramarital affairs, and drug use. However, in recent years, efforts have been made in many countries to decrease the stigma and discrimination against people living with the virus.

In the most recent survey conducted in the four countries analyzed in this report, there were a series of questions designed to measure the level of stigma and discrimination confronting people living with HIV/AIDS. In this report, it is not possible to present all of the findings for each survey, so only a sampling of some of the results are presented in Table 6.7. Readers interested in more information are referred to the individual country reports.

There was one question common to all four surveys: “Would you care for a family member living with HIV/AIDS in your own house?” As shown in Table 6.7, at least 70 percent of women living in El Salvador, Honduras, and Nicaragua would care for a family member in their house, while only 62.0 percent of Guatemalan women said that they would do this. In all of the countries, fewer rural women

than urban women would care for a family member living with HIV/AIDS, with the largest urban/rural differentials found in Nicaragua and Guatemala.

Among El Salvadoran women, only 39.8 percent of the women would buy vegetables from a vendor who had AIDS, and in Guatemala and Honduras, less than 50 percent of the women would allow a person with HIV/AIDS to continue working. In El Salvador and Nicaragua from 42.7 to 47.1 percent of the women would maintain as a secret that a family member has HIV/AIDS. Important urban/rural differences should be noted for these situations.

Turning to the men, about the same percentage of men as women in El Salvador, Guatemala, and Honduras would care for a family member living with AIDS. Fewer men than women in El Salvador would buy vegetables from a vendor living with AIDS, and fewer men than women in Honduras would allow a person with HIV/AIDS to continue working. However, fewer men than women in El Salvador would keep secret that a family member has HIV/AIDS.

Based on the above analysis, rural women and men are more likely to be discriminatory against persons living with HIV/AIDS than urban women and men. Although there is not always a clear pattern with regard to gender, it appears that women are less likely to be discriminatory than men.

Table 6.7
Acceptance of Persons Living With HIV/AIDS, According to Area of Residence:
Women Aged 15–49 and Men Aged 15–59
(Most Recent Survey)

Country/Area	Year of Survey	Women				Men			
		Care for a Family Member*	Buy Vegetables from a Vendor†	Permit Person to Work‡	Keep Infection a Secret§	Care for a Family Member*	Buy Vegetables from a Vendor†	Permit Person to Work‡	Keep Infection a Secret§
El Salvador†	2002/03								
Total		74.6	39.8	na	42.7	72.8	34.8	na	35.6
Urban		76.2	44.5	na	49.1	78.3	44.3	na	44.8
Rural		72.4	33.4	na	33.8	67.6	25.7	na	26.9
Guatemala	2002								
Total		62.0	na	49.8	na	63.4	na	48.1	na
Urban		70.7	na	61.7	na	73.3	na	61.8	na
Rural		54.5	na	39.4	na	55.7	na	37.5	na
Honduras	2001								
Total		74.1	na	42.5	na	75.1	na	32.4	na
Urban		78.8	na	52.8	na	81.6	na	45.8	na
Rural		69.2	na	31.6	na	69.7	na	21.1	na
Nicaragua	2001								
Total		70.5	na	na	47.1	na	na	na	na
Urban		76.6	na	na	52.7	na	na	na	na
Rural		58.4	na	na	36.0	na	na	na	na

na: Not available.

* Care for a family member living with HIV/AIDS.

† Buy vegetables from a vendor who has AIDS.

‡ Allow persons with HIV/AIDS to continue working.

§ Maintain as a secret that a family member has HIV/AIDS.

†† Includes only percent of persons who have heard of HIV/AIDS.

Knowledge and Use of Condoms

Between 93.5 percent and 97.6 percent of women aged 15–49 in El Salvador, Honduras, and Nicaragua were aware of condoms at the time of the last survey (Table 6.8 and Graph 6.5). This compares with condom awareness in

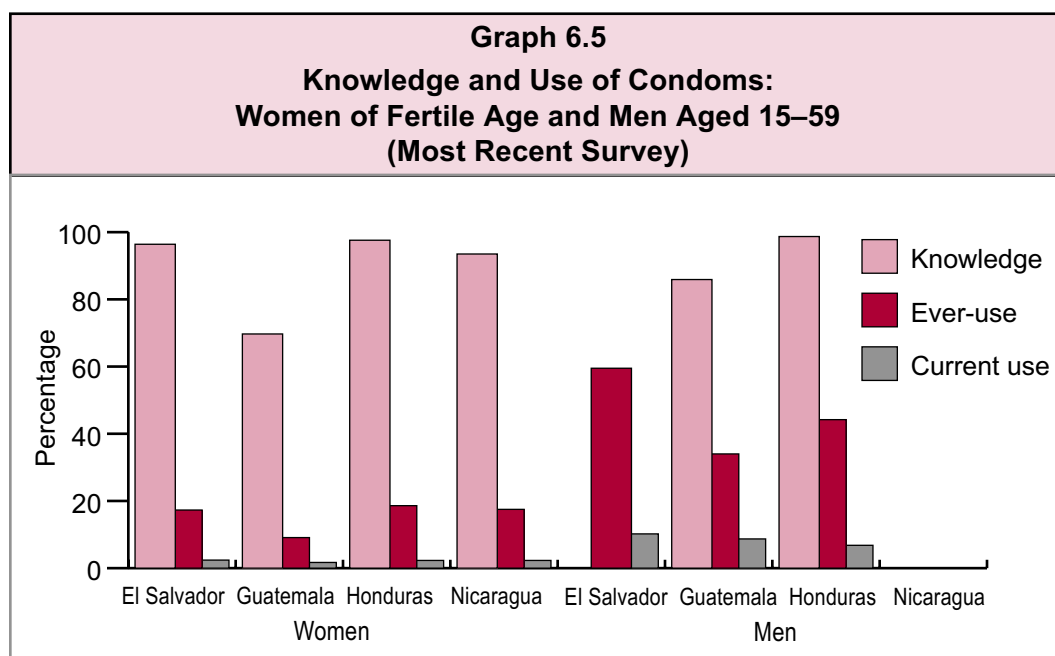
Guatemala of only 69.7 percent, which ranges from 59.6 percent among rural women to 83.4 percent among urban women. Compared to knowledge of condoms, ever-use of condoms is low in every country, and current use is extremely low, ranging from a low of 1.7 percent in Guatemala to a high of 2.3 to 2.4 percent in the other countries.

Table 6.8
Knowledge and Use of Condoms,
According to Area of Residence: Women Aged 15–49
and Men Aged 15–59 (Most Recent Survey)

Country/Area	Year of Survey	Women			Men		
		Knowledge	Ever-Use	Current Use*	Knowledge	Ever-Use	Current Use*
El Salvador	2002/03						
Total		96.4	17.3	2.4	na	59.5	10.2
Urban		98.6	21.2	2.9	na	68.5	11.7
Rural		93.5	12.3	1.7	na	51.2	8.8
Guatemala	2002						
Total		69.7	9.1	1.7	85.9	34.0	8.7
Urban		83.4	13.3	2.5	93.6	47.2	13.6
Rural		59.6	5.9	1.1	80.4	24.3	5.1
Honduras	2001						
Total		97.6	18.6	2.3	98.7	44.2	6.8
Urban		99.4	23.0	2.8	99.6	56.1	7.7
Rural		95.7	14.0	1.7	98.0	34.3	6.1
Nicaragua	2001						
Total		93.5	17.5	2.3	na	na	na
Urban		97.5	21.2	2.7	na	na	na
Rural		86.6	11.1	1.5	na	na	na

na: Not available.

* During the 30 days prior to interview.



As expected, knowledge and use of condoms is higher among men compared to women (Graph 6.5). Ever-use of condoms is also much more common among men with over a third of men in Guatemala to near 60 percent in El Salvador, having ever-used condoms. Current use of

condoms, however, is relatively low in all three countries with male data. Only 6.8 percent of men in Guatemala, 8.7 percent in Honduras, and 10.2 percent in El Salvador reported condom use during the 30 days prior to interview.

Number of Sexual Partners in the Past 12 Months and the Use of Condoms

Men in El Salvador, Guatemala, and Honduras who were sexually active during the 12 months prior to interview were asked how many sexual partners they had during the period. As shown in Table 6.9, the majority of the men in each country had only one sexual partner. Married men were more likely than unmarried men to report one sexual partner, which ranged from about 86 percent in El Salvador and Honduras to 96.2 percent in Guatemala. In each country, a higher percentage of unmarried men than married men had multiple sexual partners during the year (Graph 6.6). This is not to suggest that married men were always faithful to their wives, as approximately 13 percent of married men in El Salvador and Honduras had two or more sexual partners during the 12 month period. Of

the men with multiple partners, the majority had two partners, although from 7.6 to 13.0 percent of unmarried men had four or more partners.

The men were also asked if they used condoms in the last sexual relation with their various sexual partners. In Table 6.10, the results of this analysis are presented. Using Honduras as an example, of the men who had only one sexual partner during the previous 12 months, 88.9 percent did not use condoms with that partner, while 11.1 percent did. Of the men who had two sexual partners, 47.9 percent of the men did not use condoms with either partner, while 31.5 percent used condoms with one of the partners, and 20.6 percent with both. And so on. The overall patterns of use according to numbers of partners are generally similar in El Salvador and Guatemala. Although the probability of using a condom increases as the number of sexual partners increases, a critical message of Table 6.10 is that use is neither universal nor consistent.

Table 6.9
Number of Sexual Partners in the 12 Months Prior to Interview,
According to Marital Status: Men Aged 15–59 With Sexual Experience
in the Previous 12 Months (Most Recent Survey)

Country/Marital Status	Year of Survey	Number of Sexual Partners			
		1	2	3	4+
El Salvador	2002/03				
Total		77.2	13.3	5.6	3.9
Married		86.5	8.0	3.3	2.2
Not married		55.9	25.6	10.9	7.6
Guatemala	2002				
Total		87.6	6.5	2.9	3.0
Married		96.2	1.9	1.2	0.7
Not married		60.5	21.1	8.3	10.1
Honduras	2001				
Total		73.7	13.5	7.1	5.3
Married		86.8	7.0	3.8	2.0
Not married		44.1	28.1	14.5	13.0
na: Not available.					

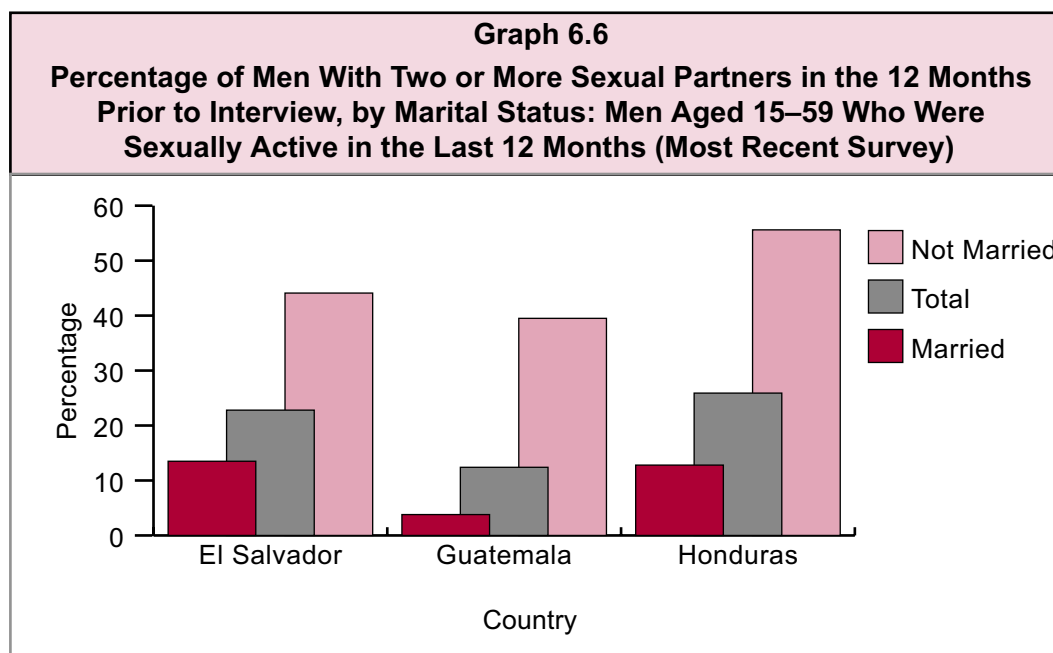


Table 6.10 Number of Sexual Partners in the 12 Months Prior to Interview With Whom Condoms Were Used in the Last Sexual Relation, According to Number of Sexual Partners: Men With Sexual Experience During the Previous 12 Months (Most Recent Survey)						
Country/No. of Partners	Year of Survey	Number with Whom Used Condoms				
		None	1	2	3	Total
El Salvador	2002/03					
No. of Partners						
1		85.3	14.7	-	-	100.0
2		40.6	29.8	29.6	-	100.0
3+		18.9	15.6	29.1	36.4	100.0
Guatemala	2002					
No. of Partners						
1		88.2	11.8	-	-	100.0
2		34.3	15.3	50.4	-	100.0
3+		29.1	8.0	24.5	38.5	100.0
Honduras	2001					
No. of Partners						
1		88.9	11.1	-	-	100.0
2		47.9	31.5	20.6	-	100.0
3		39.6	12.2	19.3	28.9	100.0
4+		27.5	18.7	27.0	26.7	100.0

Again using Honduras as an example, among the men with three sexual partners, nearly 40 percent of the men did not use condoms with any of their partners, while only 28.9 percent used condoms with all three. The probability of using condoms when multiple sexual partners are involved appears to be highest in Guatemala and lowest in Honduras.

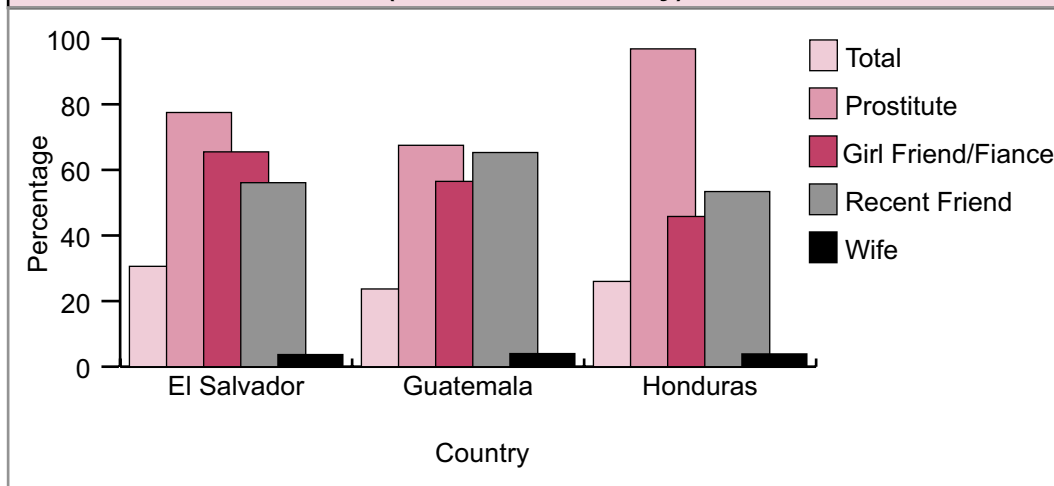
Use of condoms during the last sexual relation was also classified according to who was the sexual partner. Table 6.11 and Graph 6.7 illustrate the differential use of condoms by type of relationship to sexual partner. In all three countries with data, use is highest when the sexual partner was a prostitute, although from 22.5 to 32.5 percent of men in El Salvador

Table 6.11
Use of Condoms in Last Sexual Relation, According to Relation to Sexual Partner: Men Aged 15–59 (Most Recent Survey)

Sexual Partner	El Salvador 2002/03	Guatemala 2002	Honduras 2001
Total	30.6	23.7	26.0
Wife	3.7	4.0	3.9
Ex-Wife	na	na	18.6
Girl Friend/Fiance	65.5	56.5	45.8
Friend	55.5	59.1	48.8
Lover	50.9	na	43.3
Recent Friend	56.1	65.3	53.4
Prostitute	77.5	67.5	96.9
Other	*	37.4	*

na: Not available.
* Less than 25 cases.

Graph 6.7
Use of Condoms by Sexually Active Men in Last Sexual Relation: According to Relationship to Sexual Partner (Selected Relationships) (Most Recent Survey)



and Guatemala did not use condoms during their last sexual encounter with a prostitute. Use of condoms is also relatively high when the partner is a recent acquaintance. In all three countries use of condoms is lowest when the sexual partner is the wife (below 5 percent).

The relative low use of condoms may be related to the perception that men have of condoms in preventing the transmission of STIs and HIV. As shown in Table 6.12, from 53.9 percent (Honduras) to 65.4 percent (Guatemala) of the men believe that condoms are effective in preventing the transmission of HIV. Only in Guatemala does this belief systematically increase as the educational level of the respondents also increases. It is surprising and alarming that a relatively small percentage of the more educated men believe that condoms are efficacious, in that it is this group of men who provide leadership to those who have had fewer educational opportunities.

Table 6.12
Percentage of Men Who Believe That
Condoms are Effective in Preventing
the Transmission of HIV, According to
Education: Men Aged 15–59
(Most Recent Survey)

Country/Education	Year of Survey	Percentage
El Salvador	2002/03	
Total		58.3
0–3		59.7
4–6		63.6
7–9		57.1
10+		53.5
Guatemala*	2002	
Total		65.4
None		52.6
Primary		65.0
Secondary		68.3
Superior		73.7
Honduras*	2001	
Total		53.9
None		45.2
1–3		55.1
4–6		55.3
7+		54.8

* Includes very effective and effective.

Summary of Findings

- Knowledge of STIs other than HIV/AIDS is low among women and men in all of the countries surveyed.
- In El Salvador, Honduras, and Nicaragua, at least 92 percent of women are aware of HIV/AIDS, while only 85.6 percent of women in Guatemala are aware of this infection. Almost all men in El Salvador and Honduras say that they have heard of HIV/AIDS, compared to 94.8 percent of Guatemalan men.
- Only 58.8 to 66.1 percent of rural women in Nicaragua, Guatemala, and El Salvador know that HIV/AIDS can be asymptomatic. Knowledge that a person can be infected with HIV and be asymptomatic is greater among men, especially in Honduras. Almost an equal percentage (over 80 percent) of women and men in each country know that no cure exists for AIDS.
- Less than 50 percent of the women in each country could spontaneously mention two or more ways to prevent the transmission of HIV. Among men, the percentage that could do this ranged from 29.6 percent in El Salvador to 61.2 percent in Honduras. Similarly, the percentage of women and men who spontaneously mentioned the three primary means of preventing the sexual transmission of HIV/AIDS is relatively low in each country with data.
- Among women, knowledge of the test to detect HIV is highest in El Salvador (72.1 percent) and lowest in Guatemala (56.7 percent), while among men, knowledge is highest in Honduras (75.7 percent) and lowest in Guatemala (61.3 percent). Important urban/rural differences exist for both women and men. In general, the percentage of women and men who have ever been tested for HIV is relatively small (less than 12 percent among women and 17 percent among men).
- A high degree of stigma and discrimination against people living with HIV/AIDS still exists in the four countries. Rural women and men are more likely to be discriminatory than their urban counterparts. Conversely, women are less likely to be discriminatory than men.
- While knowledge of condoms is relatively high, current use of condoms (during the 30 days prior to interview) by both men and women is very low in each country. Among men, the probability of using a condom increases as the number of sexual partners in the past year increases, but use of condoms is neither universal nor consistent.
- The relative low use of condoms may be related to the perception that men have of condoms in preventing the transmission of HIV. Less than two-thirds of the men in El Salvador, Guatemala, and Honduras believe that condoms are effective in preventing the transmission of HIV.

CHAPTER 7



Maternal Health

A number of factors can have a considerable impact on the health of a woman, the health of her baby, and the outcome of her pregnancy, such as the use of health care services related to pregnancy, the place and type of assistance at delivery, and postpartum behaviors. The use of preventive health services such as cervical cancer screening and the receipt of tetanus toxoid vaccines can also save the lives of mothers and infants alike. These topics are examined in this chapter.

Prenatal Care

Prenatal care is important for preventing, identifying, and treating conditions that can affect the health of an expectant mother or her baby. For the optimal health of mother and child, it is recommended that every pregnant woman start seeing a health care provider for prenatal care examinations during her first trimester of pregnancy. The number of prenatal visits a woman should make during her pregnancy depends on the evolution of her pregnancy. Data presented in this chapter reflect the norm established by the Ministry of Health in El Salvador of 5 or more prenatal visits. In Nicaragua a minimum of 4 visits is recommended by the Ministry of Health.

Table 7.1 presents trends in the percentage of live births in the five years prior to the surveys for which the respondents reported that they received prenatal care. Focusing on the most recent survey, in all of the countries, over 82 percent of the pregnancies received at least one prenatal care examination. The countries with the highest prenatal coverage were Nicaragua and El Salvador (about 86 percent), while the lowest coverage was in Honduras (82.6 percent). With one exception, differences between urban and rural populations tended to be relatively small. The exception is Nicaragua, where the urban/rural differential was almost 14 percentage points (Graph 7.1).

Since the early 1990s, the percentage of pregnancies that ended in a live birth that received prenatal care increased in two of the countries (El Salvador and Nicaragua) and decreased in the other two (Guatemala and Honduras). The increase in both El Salvador and Nicaragua is due primarily to increased coverage in the rural area. Lack of improvements in coverage in Guatemala appears to be related to a decrease in coverage in the rural area, while urban coverage deteriorated slightly in Honduras (data not shown).

Table 7.1
Trends in the Use of Prenatal
Care: Live Births in the Five
Years Prior to the Survey

Country	Year of Survey	Percentage
El Salvador	1993*	68.7
El Salvador	1998*	76.0
El Salvador	2002/03*	86.0
Guatemala	1995*	86.7
Guatemala	1998/99*	86.8
Guatemala	2002†	84.3
Honduras	1991/92§	87.7
Honduras	1996†	83.9
Honduras	2001*	82.6
Nicaragua	1992/93*	71.5
Nicaragua	1998*	83.6
Nicaragua	2001*	86.4

* Live births to women aged 15–49 during the 5 years prior to the survey.

† Last live birth to women aged 15–49 during the 5 years prior to the survey.

‡ Live births to married women aged 15–49 during the 5 years prior to the survey.

§ Last live birth to women aged 15–44 during the 5 years prior to the survey.

Graph 7.1
Use of Prenatal Care, by Area of Residence
(Most Recent Survey)

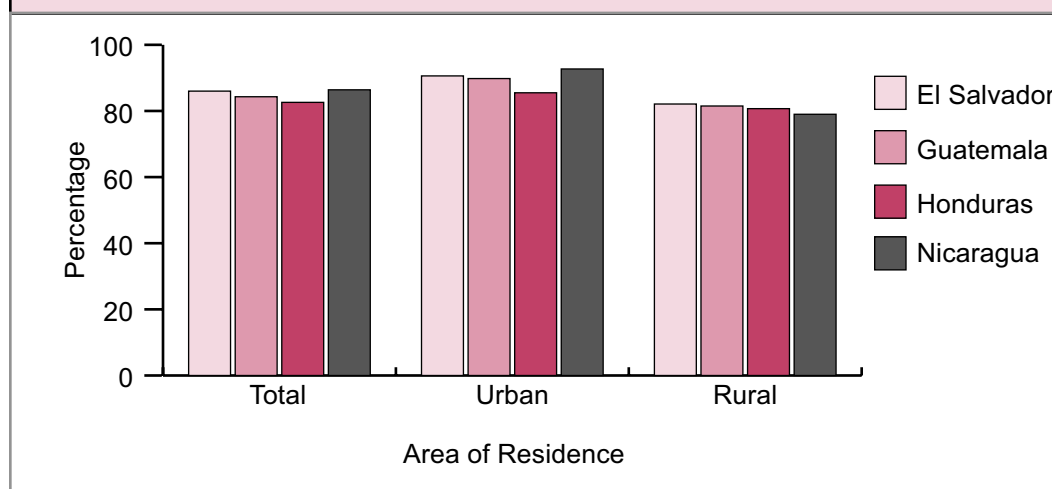


Table 7.2
Use of Prenatal Care, According to
Area of Residence, By Trimester of First Visit and
Number of Controls: Live Births in the 5 Years
Prior to the Survey (Most Recent Survey)

Country/Area	Year of Survey	First Trimester	5+ Controls
El Salvador	2002/03		
Total		66.0	71.2
Urban		73.6	79.3
Rural		59.5	64.2
Guatemala	2002		
Total		51.1	56.6
Urban		64.4	67.4
Rural		44.5	51.2
Honduras	2001		
Total		56.4	58.6
Urban		64.1	67.2
Rural		51.3	53.1
Nicaragua	2001		
Total		61.0	71.6*
Urban		69.7	82.1*
Rural		50.8	59.3*

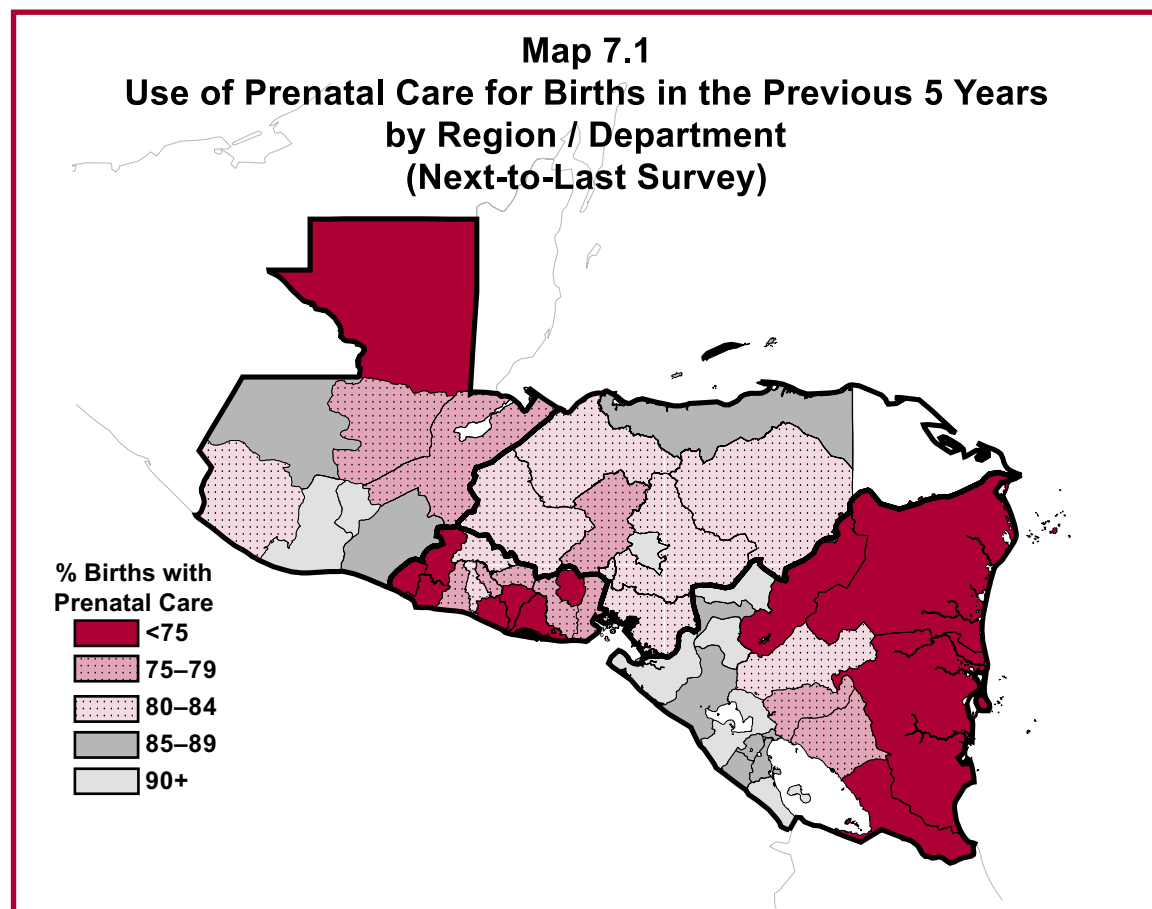
* Four or more controls.

According to the last survey conducted in each country, nearly two-thirds of women in El Salvador began receiving prenatal care during their first trimester of pregnancy, with Nicaragua not far behind at 61.0 percent (Table 7.2). Care tended to begin later in Guatemala (51.1 percent), followed by Honduras (56.4 percent). However, in all of the countries, there is a trend in receiving the first prenatal examination at earlier gestational ages (data not shown).

Also shown in Table 7.2, the percentage of

pregnancies receiving five or more prenatal care examinations is highest in Nicaragua (71.6 percent) and El Salvador (71.2 percent) and lowest in Honduras (58.6 percent) and Guatemala (56.6 percent).

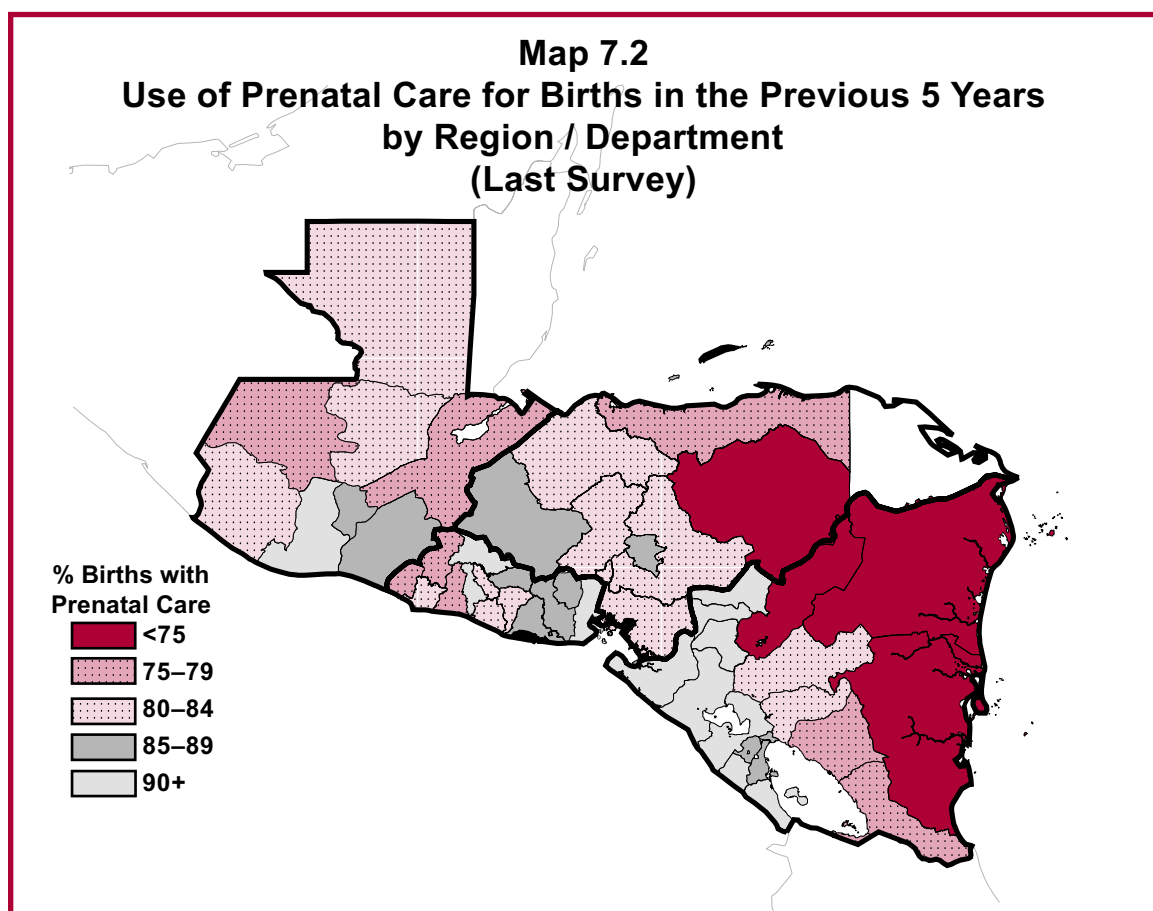
Urban women are more likely than their rural counterparts to begin prenatal care during the first trimester of pregnancy, and to receive five or more visits. Focusing only on rural women, rural women in El Salvador rank first on these measures, while Guatemala ranks last.



Maps 7.1 and 7.2 show the use of prenatal care for sub-national regions, according to the next-to-last and last surveys conducted in each of the four countries. In Nicaragua, there was little or no change between the surveys in the departments that are not adjacent to the Pacific Ocean. In Honduras, there is a notable change for the better in the health region that borders northern El Salvador, while the health region on Honduras' northern coast lost coverage. With regard to El Salvador, each department appears to have enjoyed an increase in prenatal care, especially in those departments in the eastern

part of the country. Guatemala presents a mixed picture in that some health regions increased prenatal coverage between the two surveys, while in others coverage decreased.

In the countries for which there are data (El Salvador, Guatemala, and Honduras), the Ministry of Health is the primary provider of prenatal care, according to the latest survey (data not shown). The second most important provider in El Salvador and Guatemala are their respective Social Security Institutes (ISSS and IGSS), while in Honduras it is private physicians.



Delivery Care

Skilled medical assistance during childbirth, whether at home or in a medical facility, can save women's lives. Untreated or improperly treated complications of pregnancy, delivery, and the postpartum period are a leading cause of death for women in developing countries. To prevent maternal complications, skilled attendants are needed to provide assistance with delivery and monitoring of the postpartum period. Skilled attendants include doctors, nurses, and midwives trained to manage normal

deliveries and who can also diagnose and refer or else manage obstetric complications.

Surveys measure skilled delivery care in two ways: by the percentage of women giving birth in a medical facility rather than at home, and by the proportion of all births that are attended by skilled personnel, whether at home or in a health facility. Usually, home deliveries are associated with lower skilled assistance. For all four countries, data exist on the percentage of births attended in a medical facility, while only Guatemala and Nicaragua have data on births attended by skilled personnel.

Table 7.3
Trends in the Percentage of Deliveries
Attended in a Medical Facility, By Area of Residence:
Live Births in the 5 Years Prior to the Survey

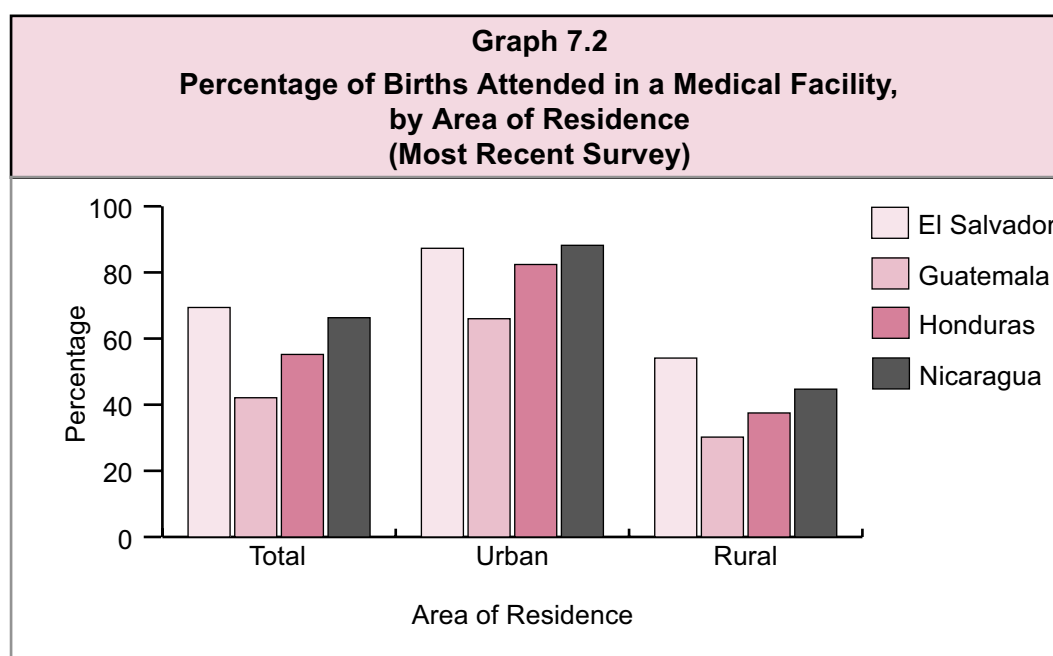
Country	Year of Survey	Percentage
El Salvador	1993*	51.0
El Salvador	1998*	58.0
El Salvador	2002/03*	69.4
Guatemala	1995*	35.3
Guatemala	1998/99*	41.0
Guatemala	2002*	42.1
Honduras	1991/92‡	45.6
Honduras	1996†	53.8
Honduras	2001*	55.2
Nicaragua	1992/93*	59.2
Nicaragua	1998*	63.6
Nicaragua	2001*	66.3

* Live births to women aged 15–49 during the 5 years prior to the survey.
† Last live birth to women aged 15–49 during the 5 years prior to the survey.
‡ Last live birth to women aged 15–44 during the 5 years prior to the survey.

According to data from the last survey conducted in each country, over half of the women in El Salvador, Honduras, and Nicaragua who had at least one live birth in the five years prior to the survey delivered in a medical facility, ranging from 55.2 percent in Honduras to 69.4 percent in El Salvador (Table 7.3). The level was lowest in Guatemala, at 42.1 percent. However, it should be noted that deliveries outside of medical facilities are relatively common in all of the countries, ranging from 30 percent in

El Salvador to 58 percent in Guatemala. Not surprisingly, births outside of medical facilities were far more frequent in rural areas than in urban areas, ranging from 46 percent in El Salvador to 70 percent in Guatemala (Graph 7.2).

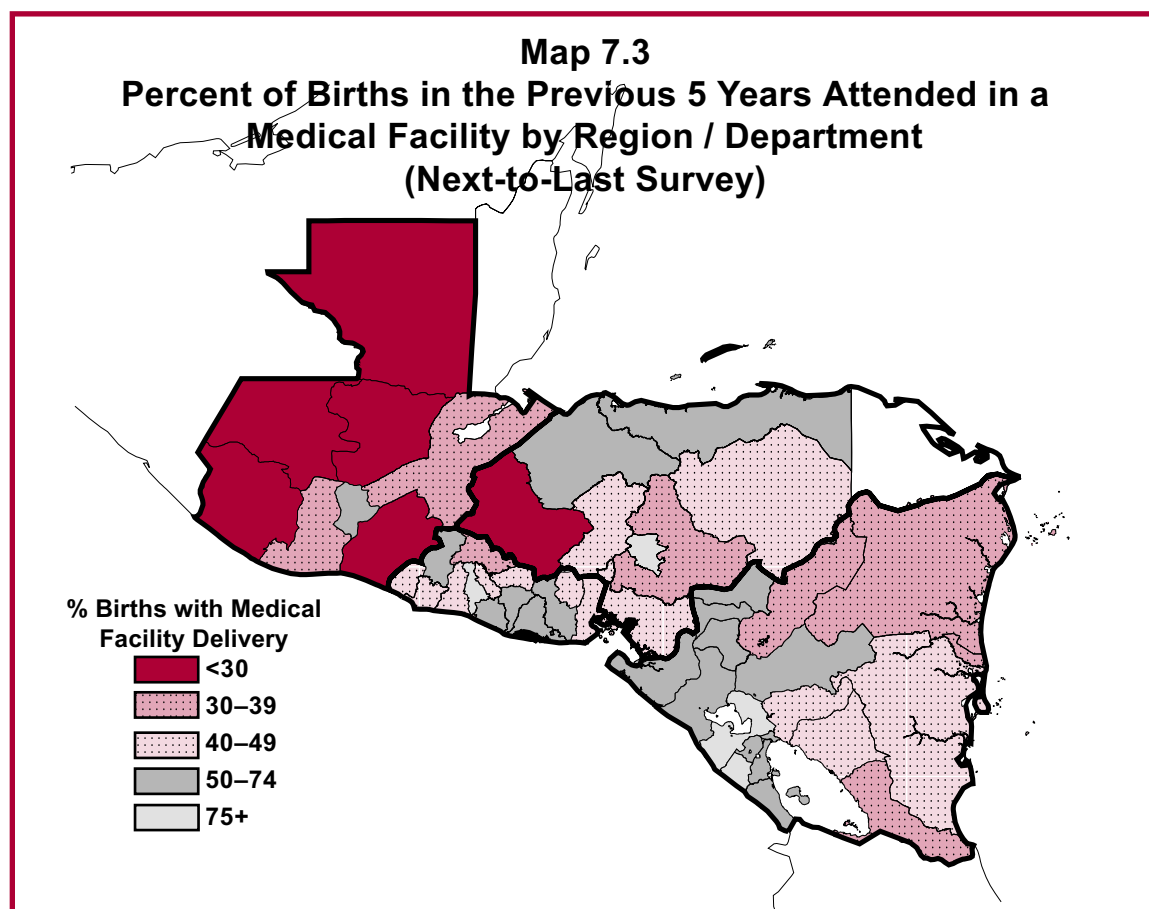
Each of the countries has experienced an increase in the proportion of births in medical facilities since the early 1990s (Table 7.3). Most striking was the increase in El Salvador, where in the



2002/03 survey 69.4 percent of women reported that their deliveries were in a medical facility, compared with 51.0 percent reported in 1993, for an 18 percentage point increase. El Salvador is followed by Honduras (10 percentage point increase) and by Nicaragua and Guatemala with a 7 percentage point increase.

With respect to who attended the deliveries,

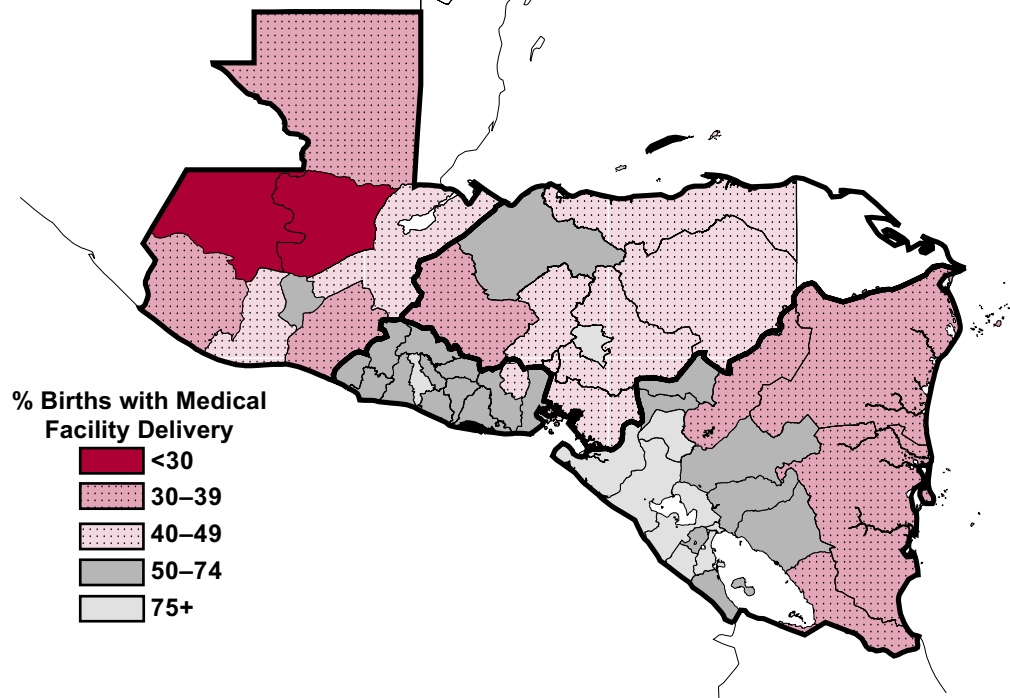
data exist for Guatemala and Nicaragua from the last survey conducted in these countries. In Guatemala, 37.0 percent of all births occurring in the five years prior to interview were attended by a physician, 4.4 percent by a nurse, and 47.5 percent by a midwife. In Nicaragua, 45.2 percent were attended by a physician, 18.9 percent by a gynecologist, 2.8 percent by a nurse, and 22.7 percent by a midwife (data not shown).



Maps 7.3 and 7.4 show the percentage of births attended in a medical facility, according to the next-to-last and last surveys in each country. What stands out when the two maps are compared is that in almost every department in El Salvador over 50 percent of the births are attended in a medical facility, according to the most recent survey. Excluding the Northern and Southern Atlantic Autonomous Regions (RAAN and RAAS) in Nicaragua, at least 50

percent of births are attended in a medical facility in the remaining departments, with most of the departments that border the Pacific Ocean reaching 75 percent. Some improvement is noted in Honduras, but the health region on the northern coast suffered a decline between the two surveys. Guatemala's situation improved slightly, especially in those departments that border the Pacific Ocean.

Map 7.4
Percent of Births in the Previous 5 Years Attended in a
Medical Facility by Region / Department
(Last Survey)



Cesarean Births

In its plan to reduce maternal mortality, the Pan American Health Organization (PAHO) indicates that the percentage of all births in a country by cesarean section should range from 5 to 15 percent. If the percentage falls below 5 percent, this indicates lack of accessibility to the procedure, while if it is above 15 percent, this indicates abuse in the use of this procedure. In Table 7.4, trends in the percentage of all deliveries that were by cesarean section are shown. Focusing on the most recent survey, El Salvador has the highest cesarean rate (22.0 percent), while Honduras has the lowest rate (7.9 percent). As shown in Graph 7.3, the lowest cesarean rate was found to be among Honduran women who live in rural areas (4.7 percent) and the highest among El Salvador's urban women (29.5 percent). Important urban/rural differentials exist. For example, in Nicaragua and Honduras, approximately three times more women who live in urban areas experienced a cesarean section than women who live in rural areas. In Guatemala and El Salvador the differential is approximately two times greater. The data indicate that, at least for Nicaragua and Guatemala, the trend in delivering births by cesarean section is beginning to level off, whereas in El Salvador there appears to be an upward trend.

Table 7.4
Trends in the Percentage of All Deliveries That Were By Cesarean Section: Live Births in the 5 Years Prior to the Survey

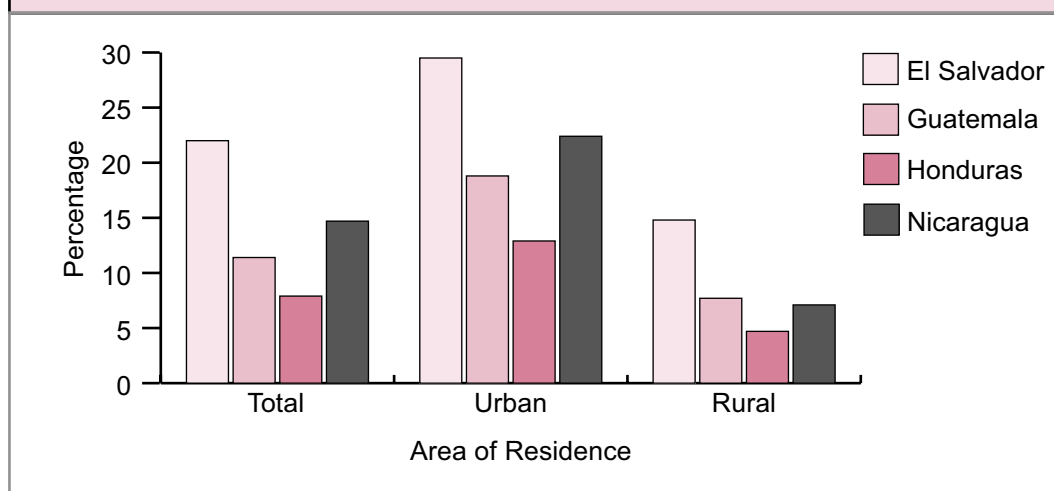
Country	Year of Survey	Percentage
El Salvador	1993*	na
El Salvador	1998*	15.7
El Salvador	2002/03*	22.0
Guatemala	1995*	8.2
Guatemala	1998/99*	10.8
Guatemala	2002*	11.4
Honduras	1991/92†	6.5
Honduras	1996†	6.3
Honduras	2001*	7.9
Nicaragua	1992/93*	8.0
Nicaragua	1998*	15.4
Nicaragua	2001*	14.7

* Live births to women aged 15–49 during the 5 years prior to the survey.

† Last live birth to women aged 15–49 during the 5 years prior to the survey.

‡ Last live birth to women aged 15–44 during the 5 years prior to the survey.

Graph 7.3
Percentage of All Deliveries That Were Cesarean, by Area of Residence (Most Recent Survey)



Postpartum Care

It is usually a joyful event when a woman gives birth to a baby she wants. Despite the pain and discomfort, birth is the long-awaited culmination of pregnancy and the start of a new life. However, birth is also a critical time for the health of the mother and her baby. Problems may arise that, if not treated promptly and effectively, can lead to ill-health and even death for one or both of them. Nonetheless, the postpartum period is often neglected by maternity care. The lack of postpartum care ignores the fact that the majority of maternal deaths and disabilities occur during the postpartum period and that early neonatal mortality is high. Postpartum care should include: the prevention and early detection and treatment of complications and disease, and the provision of advice and services on breastfeeding, birth spacing, immunization, and maternal nutrition.

According to the last survey conducted in each country, there was great variation in the proportion of women receiving postpartum care, ranging from 20.3 percent in Guatemala to 54.2 percent in El Salvador (Table 7.5). As shown in Graph 7.4, postpartum care coverage was higher in urban areas than in rural areas in each country, but the percentage of urban women receiving postpartum care pales when compared with the percentage of women receiving prenatal care (see Table 7.1).

Table 7.5
Trends in the Use of Postpartum Care: Live Births in the 5 Years Prior to the Survey

Country	Year of Survey	Percentage
El Salvador	1993*	30.3
El Salvador	1998*	43.3
El Salvador	2002/03*	54.2
Guatemala	1995*	na
Guatemala	1998/99*	na
Guatemala	2002*	20.3
Honduras	1991/92†	33.6
Honduras	1996†	34.3
Honduras	2001*	34.0
Nicaragua	1992/93*	30.5
Nicaragua	1998*	na
Nicaragua	2001*	28.4

* Live births to women aged 15–49 during the 5 years prior to the survey.

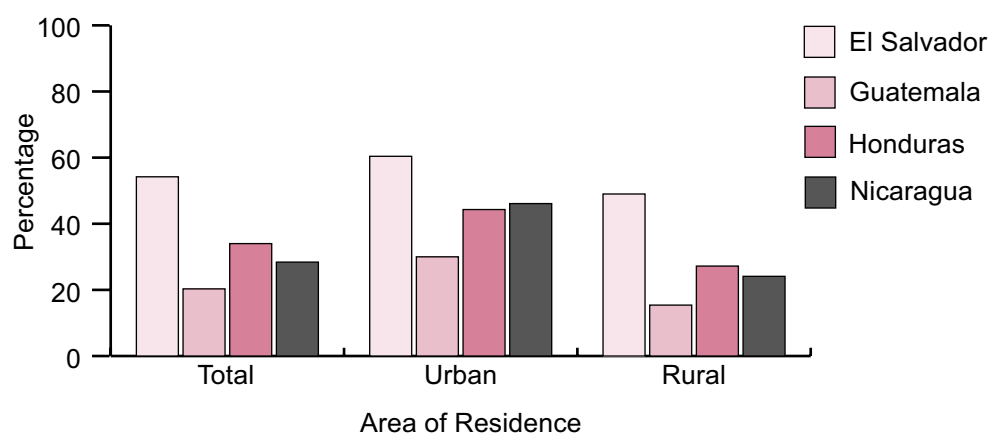
† Last live birth to women aged 15–49 during the 5 years prior to the survey.

‡ Last live birth to women aged 15–44 during the 5 years prior to the survey.

na: Not available.

In general, it can be said that postpartum care is the least used maternal and child health service offered in the four countries. Only in El Salvador does one see a systematic increase in the use of postpartum care since the early 1990s.

Graph 7.4
Use of Postpartum Care, by Area of Residence (Most Recent Survey)



Changes in the Use of Maternal Health Services

Graph 7.5 shows changes in the use of key maternal health services between the third-to-last survey conducted in the early 1990s and the most recent survey since 2000. El Salvador is notable for having the most pronounced increases for every health service shown. Guatemala registered a decline in prenatal care and almost a 20 percent increase in births attended in a medical facility. Honduras also registered a decline in prenatal care, a 21 percent increase in medical deliveries, and a very small increase in postpartum care. With regards to Nicaragua, this country enjoyed both an increase in prenatal care and in medical deliveries, but a decline in postpartum care.

Cervical Cancer Screening

Worldwide, cervical cancer is the second most common cancer of women, and is the most frequent cancer of women in developing countries. In countries where a decline in mortality due to cervical cancer has been recorded, much of the decline has been attributed to widespread use of cervical cancer screening (Papanicolaou smear test), resulting in detection at an earlier and therefore more curable stage with the treatment of premalignant lesions. Experts recommend that

women who are sexually active, or at least 18 years old, should have a Pap test annually or at least every three years. Although the validity of self-reported rates of Pap testing cannot be established without examining medical records, survey results are often used to estimate the extent of cervical screening in the general population. The last surveys conducted in El Salvador, Guatemala, and Honduras included a series of questions regarding Pap testing among the female respondents.

As shown in Table 7.6, the percentage of all sexually experienced women aged 15–49 who reported ever having a Pap test ranged from a low of 36.2 percent in Guatemala to a high of 84.7 percent in El Salvador. In all three of the countries, Pap smear prevalence was higher in urban areas than in rural areas, with the smallest urban/rural differential in El Salvador (3.6 percent) and the largest in Honduras (17 percent) and Guatemala (20 percent).

The proportion of sexually experienced women who reported at least one cervical cancer screening test increased dramatically in El Salvador and Honduras over the past decade. In El Salvador screening increased by 17 percentage points between 1993 and 2002/03, while in Honduras screening increased by 10 percentage points between 1996 and 2001 (data not shown). In both countries, the largest increase occurred in the rural area.

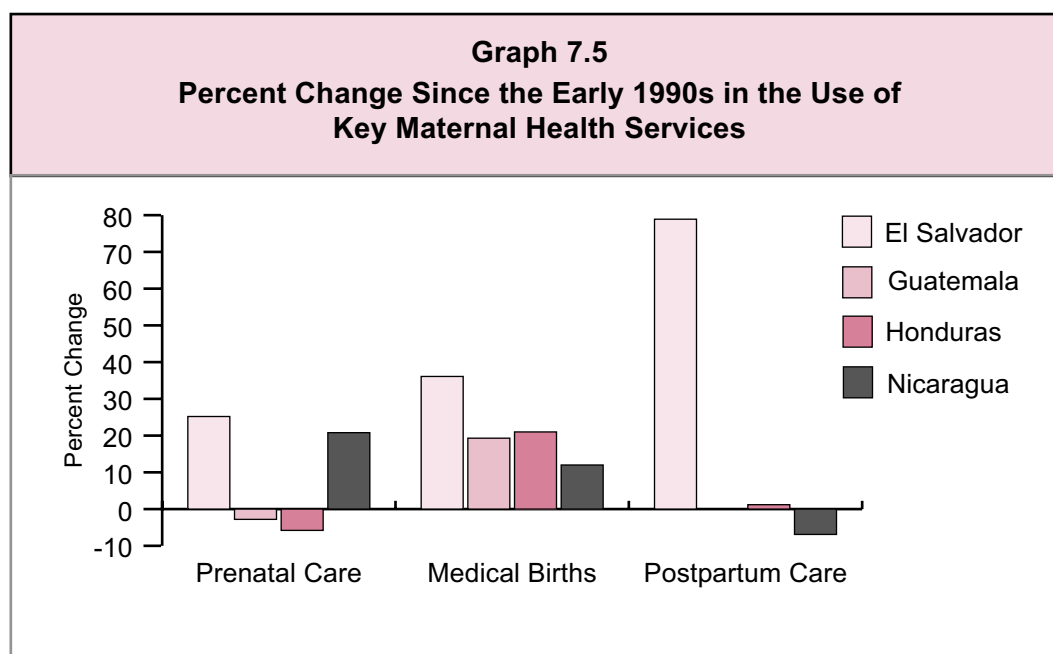


Table 7.6
Percentage of Women Who Have Ever Been
Screened For Cervical Cancer, By Area of Residence:
All Sexually Experienced Women Aged 15–49
(Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	84.7	86.3	82.7
Guatemala	2002	36.2	48.0	27.7
Honduras	2001	60.9	69.5	52.6
Nicaragua	2001	na	na	na
na: Not available.				

Tetanus Toxoid Injections

Tetanus is the only vaccine-preventable disease that is not communicable but acquired through environmental exposure to the spores of *Clostridium tetani*. Neonatal (newborn) tetanus is the most common form of tetanus in developing countries. The disease is caused by contamination of the umbilical stump with spores following childbirth through cutting the cord with a non-sterile instrument or by application of animal dung to the cut cord.

To protect the newborn with passive immunity, women should receive at least two doses of tetanus toxoid vaccine during their pregnancy. Also, clean practices should be used during delivery and for the care of the infant's umbilical cord. The optimal program to protect newborns against neonatal tetanus via immunization of their mothers depends on the immunization

history among women. When most women of childbearing age have not previously been immunized with TT in their infancy or adolescence, implementation of a TT five-dose schedule for women of childbearing age is of the utmost importance. Protective antibody levels are attained in 80–90 percent of women after the second dose, and in 95–98 percent after the third dose. This basic course provides protection for at least 5 years. Fourth and fifth doses of TT given later will prolong the duration of immunity for 10 and 20 years, respectively.

Table 7.7 shows the percentage of women living in El Salvador and Honduras who have received two or more doses of TT in their lifetime. In El Salvador and Honduras, over three-fourths of the women have received two or more doses. It should be noted that the differences between urban and rural women are small.

Table 7.7
Percentage of Women Who Have Received Two
Or More Doses of Tetanus Toxoid in Their Life,
By Area of Residence: Women Aged 15–49
(Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	76.9	78.2	75.3
Guatemala	2002	na	na	na
Honduras	2001	77.7	77.4	78.1
Nicaragua	2001	na	na	na
NA: Not available.				

Summary of Findings

- The percentage of pregnancies ending in a live birth for which prenatal care was reported is relatively high in each country—over 80 percent. Differences between urban and rural populations tended to be relatively small except in Nicaragua.
- Since the early 1990s, the percentage of pregnancies receiving prenatal care has increased in El Salvador and Nicaragua, but stagnated or deteriorated in Guatemala and Honduras.
- In all of the countries, there appears to be a trend in making the first prenatal visit at younger gestational ages and in receiving five or more controls.
- In El Salvador and Nicaragua, at least two out of three live births are attended in a medical facility. In Honduras and Guatemala, 55 and 42 percent, respectively, are attended in a medical facility. Important urban/rural differentials exist, with substantially more urban women delivering in a medical facility than rural women.
- Since the early 1990s, the percentage of live births attended in a medical facility has been increasing in each country.
- According to the most recent survey, El Salvador has the highest cesarean rate (22.0 percent), while Honduras has the lowest (7.9 percent), indicating that there may be abuse of this service in the former and that some women in the latter may not have access to this service.
- In all of the countries, less than 55 percent of the women reported that they received a postpartum examination following birth. Only El Salvador appears to be improving coverage of this service. More attention should be placed on access to post-partum care.
- The percentage of sexually experienced women who reported that they have ever been screened for cervical cancer ranges from a low of 36.2 percent in Guatemala to a high of 84.7 percent in El Salvador. The data suggest that less than half of the women are undergoing screening on an annual basis.
- In El Salvador and Honduras, more than 75 percent of women aged 15–49 have received two or more doses of tetanus toxoid.

CHAPTER 8



Infant and Child Mortality

The infant mortality rate (the probability of dying between birth and the first birthday, expressed per 1,000 live births), is an important measure of a nation's health status, well-being, and development. Although life expectancy at birth has greatly increased over the past 50 years, around 40 thousand children under five die each year in the four countries considered in this report, many from causes preventable through a combination of good care, nutrition, and medical treatment.

Map 8.1 shows the regional pattern of infant mortality during the 10 year period prior to the last survey in each country. Infant mortality is lowest in the metropolitan area of capital cities in each country. The largest differentials can be seen in Guatemala and somewhat in Nicaragua with more of a spatial gradient from the Pacific-to-Caribbean coast. It is interesting to note the relatively low infant mortality of the northern Caribbean coast of Honduras, on par with the health region of Tegucigalpa.

Table 8.1 and Graph 8.1 show survey mortality estimates for the 5-year periods preceding each of the last 3 surveys in each country. According to the most recent survey, infant mortality levels are highest in Guatemala (39 infant deaths per 1,000 live births) and lowest in El Salvador (25 deaths per 1,000). It should be noted that the infant mortality rates in Honduras and Nicaragua are both over 30 deaths per 1,000.

In each of the countries, the neonatal mortality rate (the probability of dying within the first 27 days of life) is higher than the postneonatal mortality rate (the probability of dying between the 28th day of life and the first birthday). This is not unexpected since, as infant mortality declines, the proportion of that mortality that occurs in the first 27 days of life (neonatal mortality) increases.

The child mortality rate (the probability of dying between exact ages of 1 and 5), ranges from a low of 6 per 1,000 children surviving to age 1 in El Salvador to a high of 15 in Guatemala. Similarly, the under-5 mortality rate (the probability of dying between birth and exact age 5) ranges from 31 in El Salvador to 53 in Guatemala.

All of the countries examined in this report show a systematic decline in levels of infant mortality over the past decade. For example, Nicaragua's infant mortality rate declined by 27 infant deaths

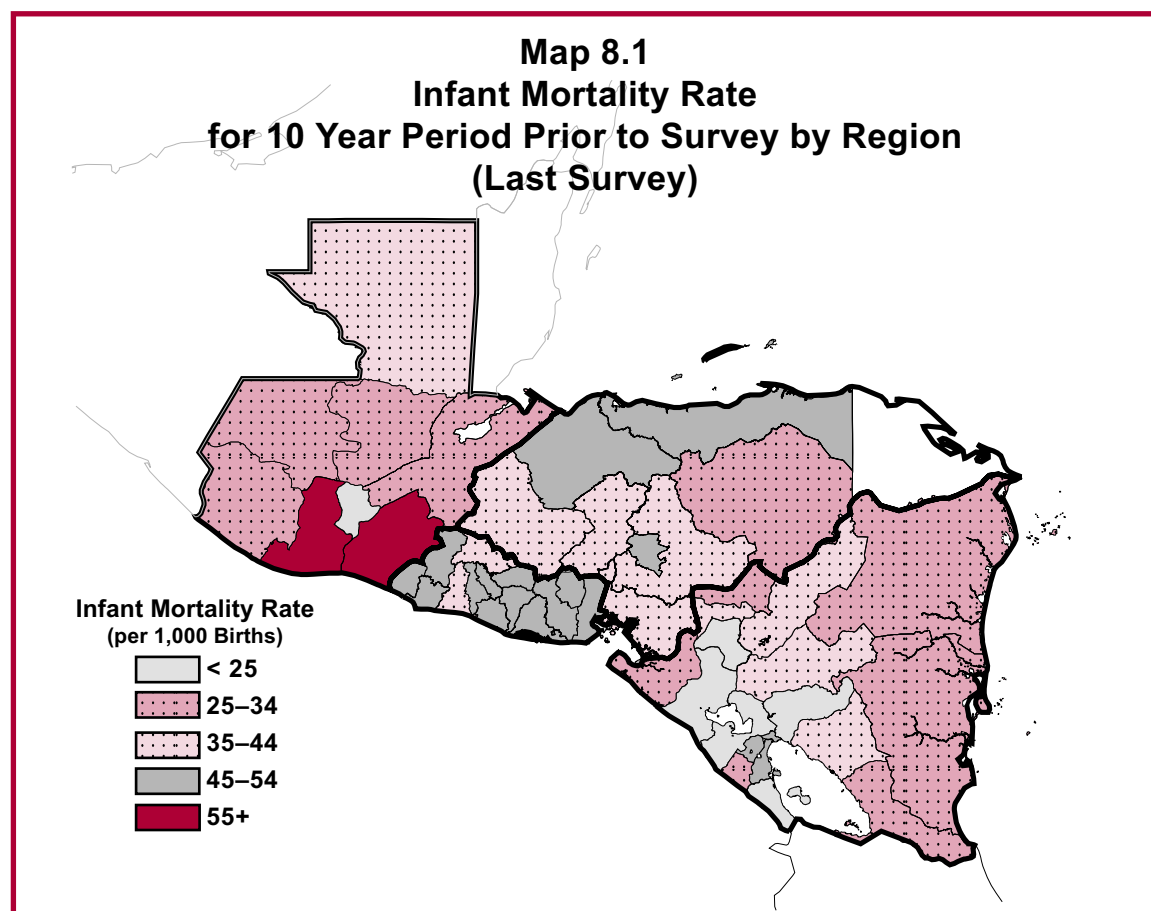
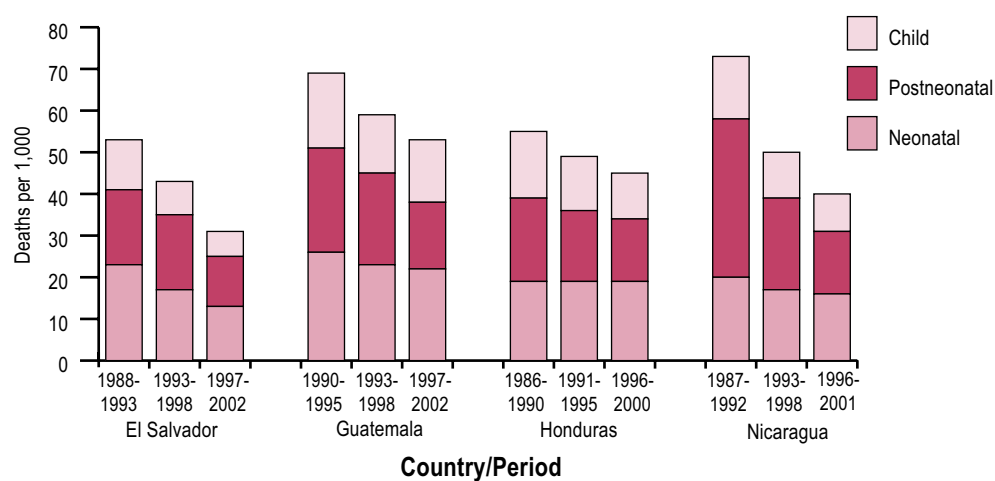


Table 8.1
Trends in Infant and Child Mortality

Country	Year of Survey	Time Period	Mortality Rates per 1,000*				
			Neonatal	Postneonatal	Infant	Child	Under 5
El Salvador	1993	1988–1993	23	18	41	12	52
El Salvador	1998	1993–1998	17	18	35	8	43
El Salvador	2002/03	1997–2002	13	12	25	6	31
Guatemala	1995	1990–1995	26	25	51	18	68
Guatemala	1998/99	1993–1998	23	22	45	14	59
Guatemala	2002	1997–2002	22	16	39	15	53
Honduras	1991/92	1986–1990	19	20	39	16	55
Honduras	1996	1991–1995	19	17	36	13	48
Honduras	2001	1996–2000	19	15	34	11	45
Nicaragua	1992/93	1987–1992	20	38	58	15	72
Nicaragua	1998	1993–1998	17	22	39	11	50
Nicaragua	2001	1996–2001	16	15	31	7	38

* Neonatal, postneonatal, infant and under-5 mortality rates are per 1,000 live births. Child mortality rates are per 1,000 children surviving to age 1.

Graph 8.1
Trends in Under-Five Mortality, Last Three Surveys



per 1,000 live births between the periods 1987–1992 and 1996–2001, with the sharpest decline occurring between 1987–1992 and 1993–1998. The largest decline in El Salvador's infant mortality rate occurred between 1993–1998 and 1997–2002, while Guatemala's decline has been constant over the years. Honduras' decline has been less accelerated than that of the other countries.

With the exception of El Salvador, most of the decline in infant mortality has been due to a decline in postneonatal mortality. It should be noted that in Honduras there has been no decline in the neonatal mortality rate since the 1986–1990 period. In Nicaragua, while postneonatal mortality declined by 23 deaths per 1,000 live births between the first and the last period shown in the table, neonatal mortality declined by only four deaths. Corresponding figures for Guatemala are nine and four deaths, respectively.

El Salvador emerges as the only country with a substantial decline in neonatal mortality, from 23 infant deaths per 1,000 live births in 1988–1993 to 13 deaths per 1,000 in 1997–2002.

Mortality Differentials

Table 8.2 shows mortality rates by area of residence, according to the last survey conducted in each country. El Salvador is the only country where the urban and rural infant mortality rates do not differ. In all of the other countries, the rural rates exceed urban rates, ranging from nine deaths per 1,000 live births in Honduras to 15 deaths per 1,000 in Guatemala, with Nicaragua not far behind with a differential of 14 deaths per 1,000. With the exception of El Salvador, child mortality rates are also higher in the rural area compared to the urban area. The lack of a rural/urban difference in El Salvador appears to be related to general improvements in education,

Table 8.2
Infant and Child Mortality Estimates, According to Area of Residence
(Most Recent Survey)

Country/Area	Year of Survey	Time Period	Mortality Rates per 1,000*				
			Neonatal	Postneonatal	Infant	Child	Under 5
El Salvador	2002/03	1997–2002					
Total			13	12	25	6	31
Urban			14	11	24	6	31
Rural			13	11	24	6	30
Guatemala	2002	1997–2002					
Total			22	16	39	15	53
Urban			20	9	29	12	40
Rural			24	20	44	16	59
Honduras	2001	1996–2000					
Total			19	15	34	11	45
Urban			15	14	29	8	36
Rural			22	16	38	13	51
Nicaragua	2001	1996–2001					
Total			16	15	31	7	38
Urban			14	10	24	3	27
Rural			18	20	38	12	49

* Neonatal, postneonatal, infant and under-5 mortality rates are per 1,000 live births. Child mortality rates are per 1,000 children surviving to age 1.

Table 8.3
Infant and Child Mortality Estimates, According to Education of
Mother (Most Recent Survey)

Country/ Education	Year of Survey	Time Period	Mortality Rates per 1,000*				
			Neonatal	Postneonatal	Infant	Child	Under 5
El Salvador	2002/03	1997–2002					
Total			13	12	25	6	31
None			26	11	36	5	41
1–3			14	16	30	5	34
4–6			10	5	16	8	23
7–9			13	6	20	10	30
10+			6	17	23	3	26
Guatemala	2002	1997–2002					
Total			22	16	39	15	53
None			32	23	55	22	76
Primary			20	15	34	11	45
Secondary+			9	4	12	5	17
Honduras	2001	1996–2000					
Total			19	15	34	11	45
None			30	34	63	23	85
1–3			21	19	40	12	51
4–6			18	10	28	9	37
7+			12	6	18	4	22
Nicaragua	2001	1996–2001					
Total			16	15	31	7	38
None			23	30	53	14	66
1–3			15	19	34	9	42
4–6			14	11	26	7	32
7–9			8	7	16	2	17
10+			20	1	22	2	23
* Neonatal, postneonatal, infant and under-5 mortality rates are per 1,000 live births. Child mortality rates are per 1,000 children surviving to age 1.							

socioeconomic conditions, prenatal care and hospital delivery services, as well as, fertility declines in rural areas in recent years. Analysis of trends in infant mortality by area of residence for El Salvador indicates that mortality decline took place primarily in rural areas since the mid 1990s.

Table 8.3 shows mortality rates according to mother's education. In all of the countries, infant mortality generally decreases as the education

of the mother increases. The differentials can be substantial. For example, in Honduras, the differential between the lowest and highest educational level shown in the table is 45 infant deaths per 1,000 live births, while in Guatemala it is 43 infant deaths. In Nicaragua, Honduras, and Guatemala, postneonatal mortality rates also show a very pronounced inverse relation with mother's education. For example, in both Nicaragua and Honduras, the difference

between the least and most educated women is 28–29 deaths per 1,000. Neonatal mortality differentials are less pronounced, with a high of 23 deaths per 1,000 in Guatemala, followed by successively smaller differentials in El Salvador, Honduras and Nicaragua, respectively.

Table 8.4 shows mortality rates, according to

age of mother at the time of the birth. Infant mortality is lowest among children of mothers aged 20–29, the prime ages of childbearing. In all of the countries, there is excess mortality for children born to women under age 20 and to women age 30 or older, especially to women aged 40–49.

Table 8.4
Infant and Child Mortality Estimates, According to Age of Mother at Birth
(Most Recent Survey)

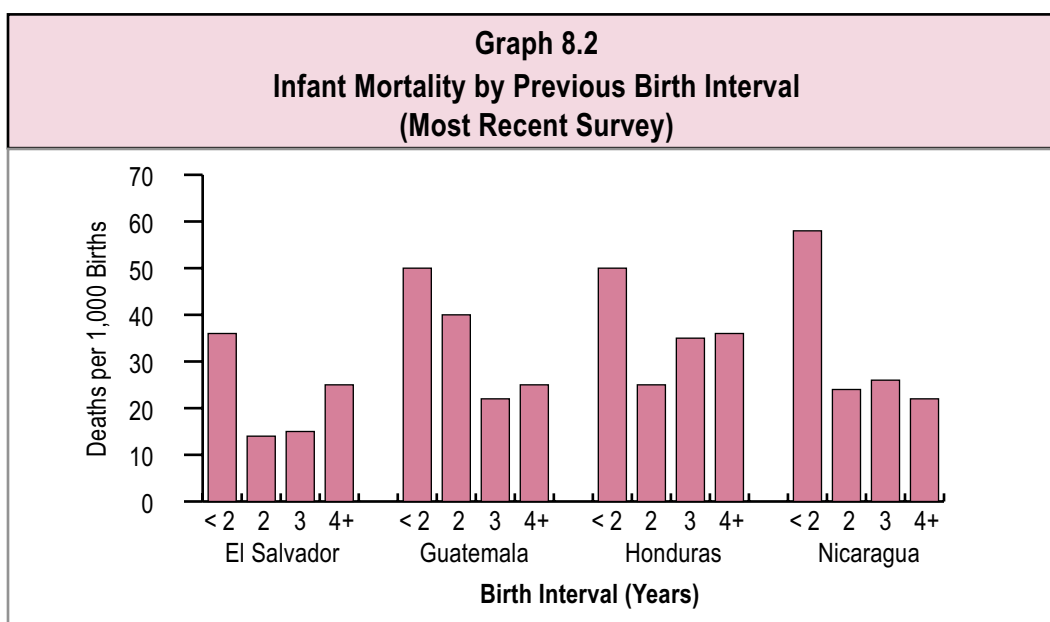
Country/Age	Year of Survey	Time Period	Mortality Rates per 1,000*				
			Neonatal	Postneonatal	Infant	Child	Under 5
El Salvador	2002/03	1997–2002					
Total			13	12	25	6	31
<20			17	9	26	14	40
20–29			10	12	22	5	27
30–39			12	8	20	2	21
40–49			56	24	80	0	80
Guatemala	2002	1997–2002					
Total			22	16	39	15	53
<20			27	18	45	12	56
20–29			20	13	33	15	48
30–39			19	19	38	14	52
40–49			62	29	91	31	119
Honduras	2001	1996–2000					
Total			19	15	34	11	45
<20			20	23	43	8	51
20–29			15	10	25	10	34
30–39			22	17	39	17	55
40–49			50	37	87	11	97
Nicaragua	2001	1996–2001					
Total			16	15	31	7	38
<20			22	12	33	7	41
20–29			13	12	25	6	31
30–39			15	23	38	9	47
40–49			14	29	42	21	63
* Neonatal, postneonatal, infant and under-5 mortality rates are per 1,000 live births. Child mortality rates are per 1,000 children surviving to age 1.							

Table 8.5
Infant and Child Mortality Estimates, According to Previous Birth Interval (Most Recent Survey)

Country/ Interval	Year of Survey	Time Period	Mortality Rates per 1,000*				
			Neonatal	Postneonatal	Infant	Child	Under 5
El Salvador	2002/03	1997–2002					
Total			13	12	25	6	31
< 2 Years			21	15	36	10	45
2–2.9 Years			7	8	14	8	22
3–3.9 Years			6	10	15	6	21
4+ Years			11	14	25	3	28
Guatemala	2002	1997–2002					
Total			22	16	39	15	53
< 2 Years			25	25	50	16	66
2–2.9 Years			21	19	40	15	55
3–3.9 Years			16	7	22	12	35
4+ Years			15	10	25	14	39
Honduras	2001	1996–2000					
Total			19	15	34	11	45
< 2 Years			26	24	50	16	66
2–2.9 Years			11	14	25	10	34
3–3.9 Years			16	18	35	9	43
4+ Years			27	10	36	13	48
Nicaragua	2001	1996–2001					
Total			16	15	31	7	38
< 2 Years			25	33	58	14	71
2–2.9 Years			11	13	24	10	34
3–3.9 Years			7	19	26	5	31
4+ Years			15	7	22	5	27
* Neonatal, postneonatal, infant and under-5 mortality rates are per 1,000 live births. Child mortality rates are per 1,000 children surviving to age 1.							

Studies in many countries have found that the length of the preceding birth interval is strongly associated with infant mortality risks and that the interval of three to five years is optimal. Births occurring after a short birth interval, i.e.,

less than 24 months, have substantially higher mortality than births occurring after a longer interval. As shown in Table 8.5 and Graph 8.2, results from the most recent survey conducted in each country are consistent with these



studies. In Nicaragua, the infant mortality rate of children with a birth interval of less than 24 months is 58 while in Honduras and Guatemala it is at 50 infant deaths per 1,000 live births. Interestingly, the rate in El Salvador is only 36 deaths per 1,000, but remains substantially higher than children born with a preceding birth interval of 2 to 3 years.

As shown in Table 8.6, infant mortality generally increases as birth order of the child increases. The children at highest risk of dying are those who are the seventh or higher birth order child.

Finally, one would expect that infant mortality, and particularly neonatal mortality, would be lower to infants born in a medical facility compared to infants born outside of a medical

Table 8.6
Infant and Child Mortality Estimates, According to Birth Order
(Most Recent Survey)

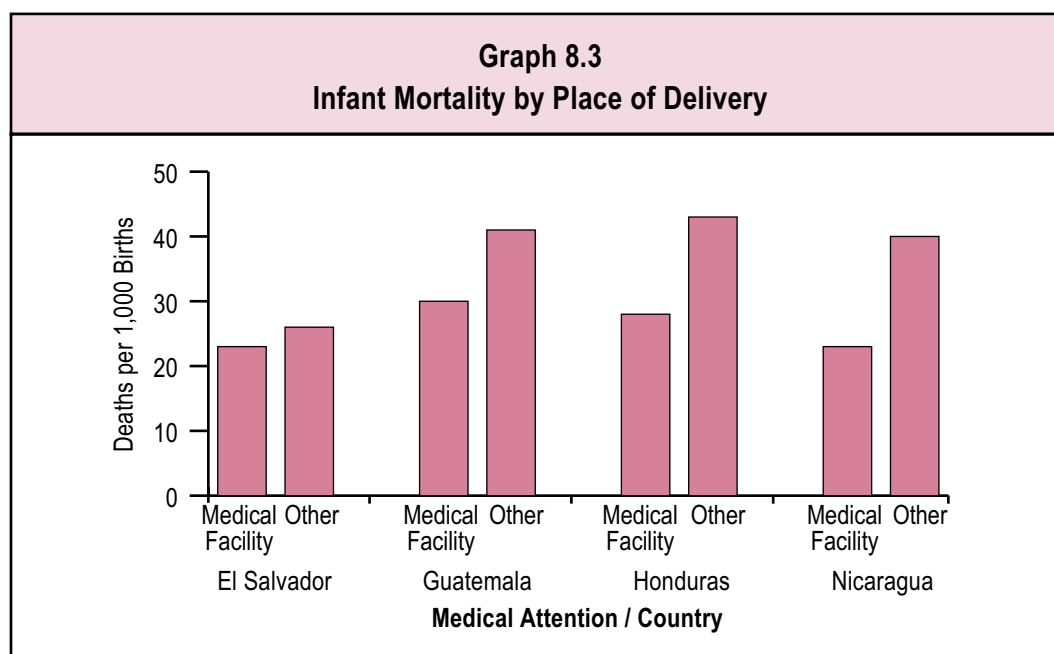
Country/Birth Order	Year of Survey	Time Period	Mortality Rates per 1,000*				
			Neonatal	Postneonatal	Infant	Child	Under 5
El Salvador	2002/03	1997–2002					
Total			13	12	25	6	31
1			12	10	22	6	27
2–3			12	11	23	9	31
4–6			9	13	23	4	26
7+			33	10	43	4	46
Guatemala	2002	1997–2002					
Total			22	16	39	15	53
1			29	14	43	13	55
2–3			17	13	30	11	41
4–6			23	20	43	18	61
7+			24	21	46	19	63
Honduras	2001	1996–2000					
Total			19	15	34	11	45
1			16	11	28	6	33
2–3			21	17	38	11	48
4–6			18	11	29	10	39
7+			21	29	50	25	74
Nicaragua	2001	1996–2001					
Total			16	15	31	7	38
1			17	8	25	3	29
2–3			16	12	28	6	34
4–6			11	16	26	7	33
7+			22	37	59	18	76
* Neonatal, postneonatal, infant and under-5 mortality rates are per 1,000 live births. Child mortality rates are per 1,000 children surviving to age 1.							

Table 8.7
Infant Mortality Estimates, According to Place
of Birth (Most Recent Survey)

Country/Place of Birth	Year of Survey	Time Period	Mortality Rates per 1,000*		
			Neonatal	Postneonatal	Infant
El Salvador	2002/03	1997–2002			
Total			13	12	25
Medical Facility			13	11	23
Other			13	13	26
Guatemala	2002	1997–2002			
Total			22	16	39
Medical Facility			22	9	30
Other			21	20	41
Honduras	2001	1996–2000			
Total			19	15	34
Medical Facility			16	13	28
Other			23	20	43
Nicaragua	2001	1996–2001			
Total			16	15	31
Medical Facility			14	9	23
Other			18	21	40
* Neonatal, postneonatal and infant mortality rates are per 1,000 live births.					

facility. According to the data shown in Table 8.7 and Graph 8.3, this is not necessarily the case in at least two of the countries. In El Salvador and Guatemala, there is no difference in the neonatal mortality rate between births occurring in a medical facility and those outside a medical facility, while in Nicaragua the difference (in favor of hospital births) is only four deaths per 1,000 live births, and increases to seven in Honduras. It is interesting to note the advantages

accrued to infants born in medical facilities during the postneonatal period in all four countries. With the exception of El Salvador, the associated advantages in survivorship by age 1 are substantial. In Guatemala, Honduras, and Nicaragua the infant mortality rates of children born outside medical facilities are 11, 15, and 17 deaths per 1,000 live births higher, respectively, than their counterparts born in medical facilities.



Perinatal Mortality

The perinatal mortality rate measures the number of perinatal deaths per 1,000 births. The perinatal period starts at 28 weeks gestation and ends at the end of the seventh day after delivery. Perinatal deaths are the sum of stillbirths plus early neonatal deaths. Perinatal mortality rates have long been used as an indicator of the standard of maternal and newborn care. The incidence of perinatal deaths is generally higher among the babies of mothers

who do not receive prenatal care, among male babies, and among first births and fifth or more pregnancies. Maternal age is another important factor associated with perinatal mortality. The high risk groups are mothers over the age of 40 and teenage mothers. Rates can be as low as 6 per 1,000 births in some developed countries, but are considerably higher in the developing world.

Table 8.8 Perinatal Mortality Estimates, According to Area of Residence (Most Recent Survey)					
Country/Area	Year of Survey	Time Period	Perinatal Mortality Rates*		
			Stillbirth	Died 0–7 Days	Total
El Salvador	2002/03	1997–2002			
Total			12	11	23
Urban			6	12	18
Rural			18	9	27
Guatemala	2002	1997–2002			
Total			18	17	35
Urban			16	17	33
Rural			19	18	36
Honduras	2001	1996–2000			
Total			16	14	30
Urban			13	12	25
Rural			18	14	32
Nicaragua	2001	1996–2001			
Total			10	11	21
Urban			9	11	20
Rural			10	12	22
* The number of early neonatal deaths (first seven days of life) and still births (defined as pregnancy losses occurring after the sixth month of pregnancy) per 1,000 viable pregnancies (live births and still births) that occurred during the reference period.					

According to the last survey conducted in each country, perinatal mortality varied from a low of 23 deaths per 1,000 births in El Salvador to a high of 35 deaths in Guatemala (Table 8.8). In general, there are more stillbirths than deaths

to infants during the first seven days of life. In each country, the rural perinatal mortality rate is greater than the urban rate, although the urban/rural differential in Guatemala is relatively small.

Summary of Findings

- Survey estimates of mortality were computed for the 5-year period preceding the last survey conducted in each country. Infant mortality estimates were lowest for El Salvador and Nicaragua (25 and 31 deaths per 1,000 live births) and higher for Honduras and Guatemala (34 and 39 deaths per 1,000).
- All of the countries have experienced a systematic decline in levels of infant mortality over the past decade and a half, with the largest decline taking place in Nicaragua and the smallest decline in Honduras.
- With the exception of El Salvador, most of the decline in infant mortality has been due to a decline in postneonatal mortality. Currently, the neonatal mortality rate in each of the countries is higher than the postneonatal mortality rate.
- The most significant infant mortality differentials were associated with the mother's education, followed by previous birth interval and area of residence. In all of the countries, infant mortality generally decreases as the education of the mother increases and as the previous birth interval increases. The data suggest that the best time to have a baby is between 20 and 29 years of age.
- Perinatal mortality is relatively high in the four countries, ranging from 23 deaths per 1,000 births in El Salvador to a high of 35 deaths per 1,000 in Guatemala.

CHAPTER 9



Child Health

Since the early 1990s, there have been improvements in child survival in the four countries examined in this report. Despite these improvements, much work remains to be done in reducing levels of infant and under-five mortality and morbidity.

This chapter covers a number of topics related to the health of the child, such as birth weight, the use of well-baby care, child immunizations, the prevalence of diarrhea and acute respiratory infections during the 15 days prior to interview, the use of oral rehydration salts to treat the most recent episode of diarrhea, and the use of antibiotics to treat acute respiratory infections.

Birth Weight

A healthy birth weight is very important for a good start in life. Low birth weight babies are at high risk of experiencing health and developmental problems, and are more likely to get sick or die in their first year of life than normal weight babies. Since birth weight is a major predictor of infant morbidity and mortality, it should be monitored closely.

The proportion of live births during the five years prior to interview that were weighed at birth or during the 7 days following birth ranged from a low of 64.5 percent in Honduras to a high of

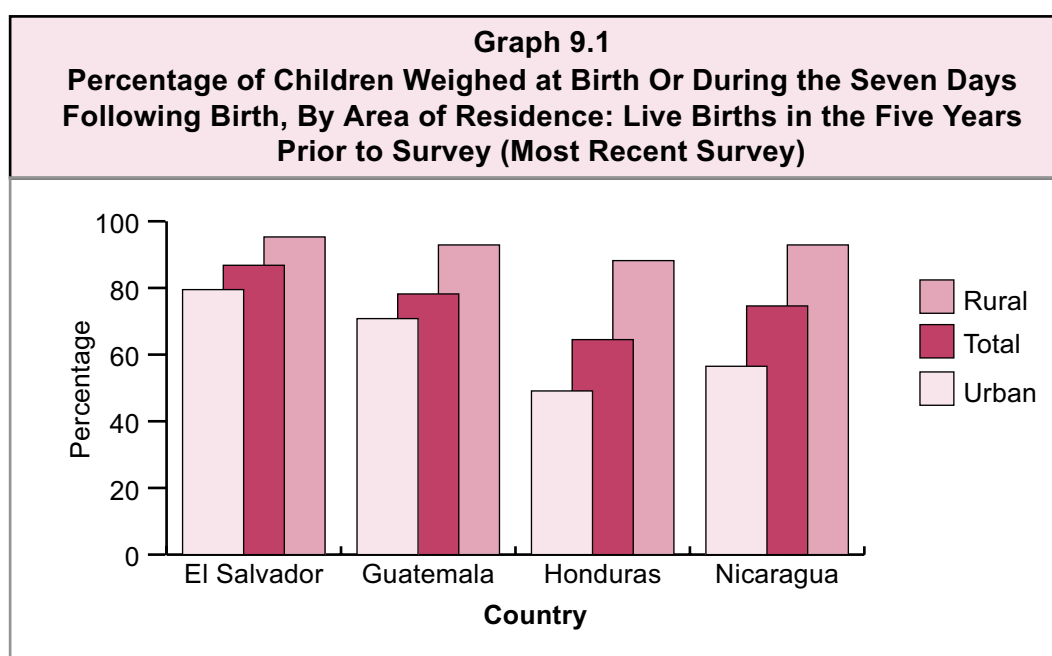
86.8 percent in El Salvador (Table 9.1 and Graph 9.1). In all of the countries, the probability of a newborn being weighed is substantially higher among newborns whose mothers live in urban areas than whose mothers live in rural areas. This is due to the fact that many deliveries in the rural areas of these countries still occur outside of a medical facility.

Well-Baby Care

Well-baby care consists of several visits to a medical facility during the child's first few years to monitor whether growth and development are proceeding normally, recognize problems early and supply appropriate intervention, provide immunizations, provide information about breastfeeding, diet and general care, and other important advice and information for parents. Because the health of the baby in the first year lays the foundation for later childhood, well-baby visits made during the first year are very important.

In the surveys conducted in the four countries profiled in this report, the questions asked about the use of well-baby care services refer to the first visit to a medical facility following birth. In general, the Ministry of Health in each country recommends that the first visit be made within 30 days of the birth of the child.

Table 9.1 Percentage of Children Weighed at Birth Or During the 7 Days Following Birth, By Area of Residence: Live Births During the 5 Years Prior to the Survey (Most Recent Survey)				
Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	86.8	95.3	79.5
Guatemala	2002	78.2	92.9	70.8
Honduras	2001	64.5	88.2	49.1
Nicaragua	2001	74.6	92.9	56.5



According to the last survey conducted in each country, the percentage of live births receiving well-baby care is very high in El Salvador and Honduras, where over 90 percent of newborns received this care (Table 9.2 and Graph 9.2). The use of well-baby care is relatively low in Guatemala, as only 43.2 percent of newborns were seen in a medical facility. As noted in the graph, the urban/rural differential is very small in El Salvador, but slightly larger in Honduras, while the differential in Guatemala is almost 17 percentage points. Since the early 1990s, the use of well-baby care has increased in El Salvador and Honduras, with the largest increase occurring in El Salvador (about 14 percentage points), and the smallest increase occurring in Honduras (6 percentage points).

Child Immunization

The World Health Organization (WHO) Expanded Program on Immunization focuses on six common childhood diseases that can be prevented by immunization: diphtheria, pertussis, and tetanus (DPT), measles, polio, and tuberculosis (BCG). Full immunization includes three doses of DPT vaccine, three doses of the oral polio vaccine, a measles vaccination, and a BCG vaccination. In this section, levels of full

Table 9.2
Trends in the Use of Well-baby Care: Live Births During The Five Years Prior To The Survey To Women Of Fertile Age

Country	Year of Survey	Percentage
El Salvador	1993*	80.8
El Salvador	1998*	89.9
El Salvador	2002/03*	95.0
Guatemala	1995a	na
Guatemala	1998/99*	na
Guatemala	2002*	43.2
Honduras	1991/92†	84.6
Honduras	1996†	77.7
Honduras	2001*	90.7
Nicaragua	1992/93*	82.9
Nicaragua	1998*	na
Nicaragua	2001*	na

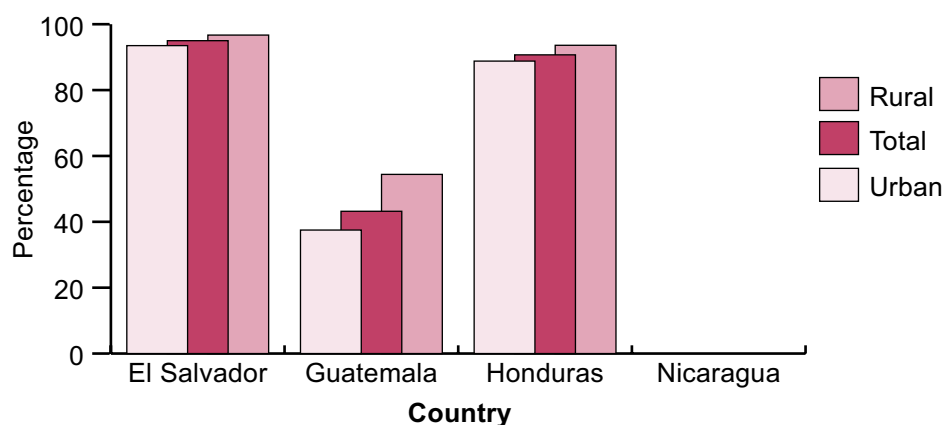
* Live births to women aged 15–49 during the 5 years prior to the survey.

† Selected live birth to women aged 15–49 during the 5 years prior to the survey.

‡ Last live birth to women aged 15–44 during the 5 years prior to the survey.

na: Not available.

Graph 9.2
Use of Well-Baby Care, By Area of Residence: Live Births in the Five Years Prior to Survey (Most Recent Survey)



immunization of children aged 12–23 months are examined (in Nicaragua the age range 18–29 months was used in the report for the most recent survey and this is the information presented here).

Among the four countries surveyed, full childhood immunization varies from a low of 62.5 percent of children aged 12–23 months in Guatemala to a high of 77.7 percent in Honduras, according to the most recent survey (last column of Table 9.3 and Graph 9.3). In each country the urban/rural differential is small.

Comparing coverage by vaccine, BCG is highest in every country, while measles vaccine, which also requires one dose to infer protection, has the poorest coverage (Graph 9.4). The data suggest that missing the third dose of vaccine

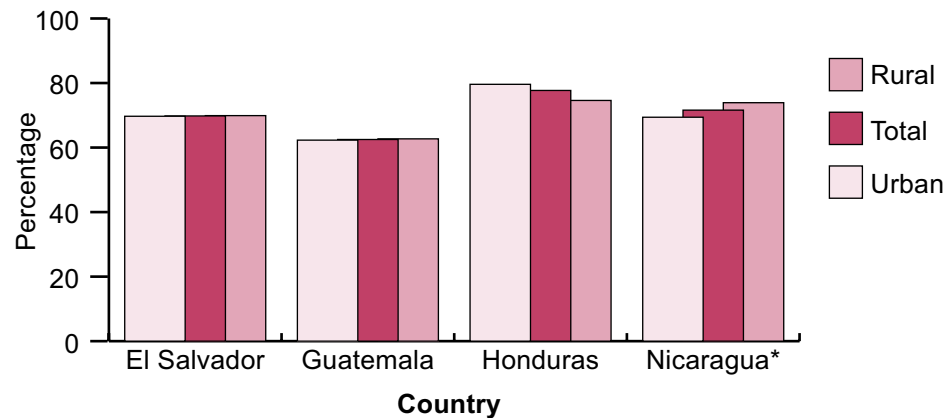
in the polio and DPT series and the measles vaccine altogether is the reason that complete immunization levels are relatively low in each country. Incomplete vaccinations can reflect problems with service delivery and logistics systems, as well as lack of health services in remote locations.

Graph 9.4 also shows that coverage of BCG and DPT is high and similar in El Salvador and Honduras. Honduras is in first place with regards to polio (91 percent) while the other countries present a range from a low of 78 percent in Guatemala to 85 percent in Nicaragua. Measles coverage is highest in Nicaragua (86 percent) followed by Honduras (83 percent), El Salvador (80 percent) and Guatemala (75 percent). For each of the vaccines shown in Graph 9.4, Guatemala has the lowest coverage.

Table 9.3 Percentage of Children Aged 12–23 Months Who are Fully Immunized, According to Area of Residence, By Vaccine (Most Recent Survey)						
Country/Area	Year of Survey	BCG	Polio	DPT	Measles	All
El Salvador	2002/03					
Total		98.3	83.3	89.2	79.9	69.8
Urban		98.3	84.9	90.3	76.9	69.9
Rural		98.2	81.8	88.2	82.9	69.7
Guatemala	2002					
Total		91.9	78.1	76.7	74.7	62.5
Urban		91.9	74.0	74.3	75.9	62.7
Rural		91.9	80.2	77.9	74.1	62.3
Honduras	2001					
Total		98.2	91.1	90.6	83.1	77.7
Urban		98.2	92.3	90.5	81.3	74.6
Rural		98.1	90.4	90.7	84.2	79.6
Nicaragua*	2001					
Total		95.5	84.7	82.7	86.4	71.6
Urban		98.7	86.9	84.7	89.8	73.9
Rural		92.5	82.7	80.7	83.1	69.4

* Based on ages 18–29 months

Graph 9.3
Percentage of Children Who are Fully Immunized With BCG, Polio, DPT, and Measles Vaccines, By Area of Residence: Children Aged 12–23 Months (Most Recent Survey)



*18–29 months

Graph 9.4
Percentage of Children Aged 12–23 Months Who are Completely Immunized (Most Recent Survey)

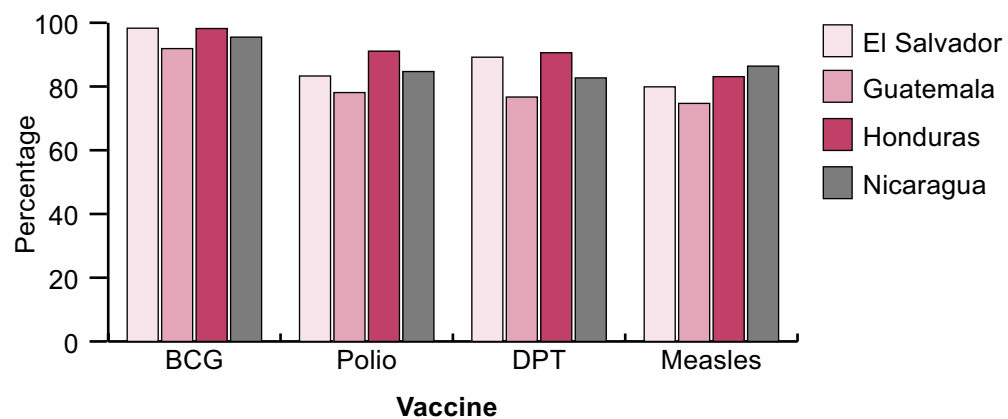
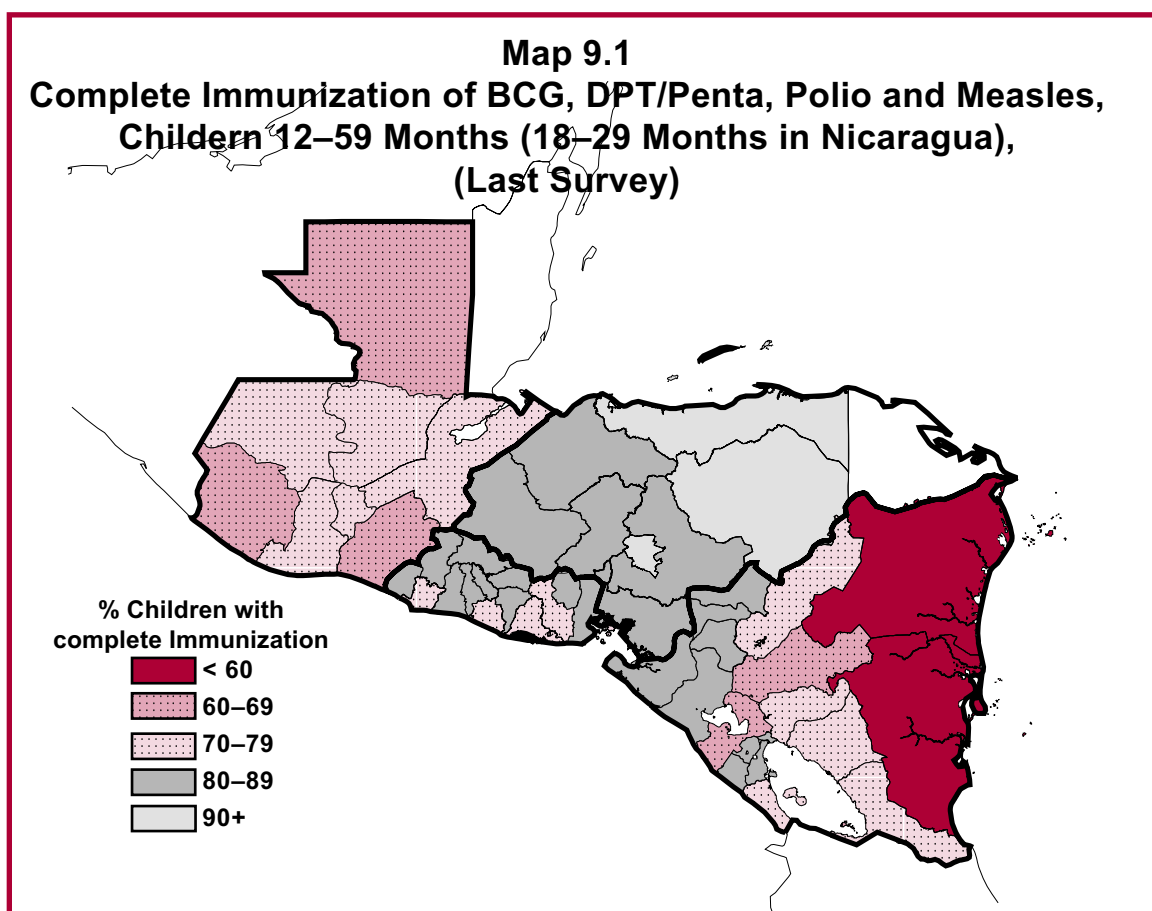


Table 9.4 Trends in the Percentage of Children Aged 12–23 Months Who are Fully Immunized, By Vaccine						
Country	Year of Survey	BCG	Polio	DPT	Measles	All
El Salvador	1993*	87.0	78.1	78.0	82.1	70.6
El Salvador	1998*	96.3	85.7	85.9	85.6	77.0
El Salvador	2002/03*	98.3	83.3	89.2	79.9	69.8
Guatemala	1995*	78.2	55.9	59.4	75.1	42.6
Guatemala	1998/99*	90.3	66.7	70.4	80.6	59.5
Guatemala	2002*	91.9	78.1	76.7	74.7	62.5
Honduras	1991/92†	94.0	94.2	93.4	80.3	na
Honduras	1996*	96.4	85.6	85.5	88.0	81.6
Honduras	2001*	98.2	91.1	90.6	83.1	77.7
Nicaragua	1992/93*	91.2	84.0	80.8	83.4	na
Nicaragua	1998*	95.0	83.0	79.7	85.7	72.6
Nicaragua	2001**	95.5	84.7	82.7	86.4	71.6
* Based on vaccination cards and mother's responses						
† Based on vaccination cards and those reporting never having a vaccine						
** Based on ages 18–29 months						

As shown in Table 9.4, between the next-to-last and last survey, gains in full childhood immunization appears to be slowing or even declining. Between the early 1990s and the late 1990s, both El Salvador and Guatemala made

significant gains in immunization coverage. But since the late 1990s a slowing, or even decline, in coverage related to measles vaccine has affected overall immunization coverage, as the coverage of the other vaccines has been increasing.



Map 9.1 illustrates the regional coverage of the vaccination program within countries. It shows percent of children, 12–59 months, who had received the recommended doses of BCG, DPT, Polio and measles vaccines, according to the most recent survey. For Nicaragua, data are presented for children ages 18–29 months. It is noteworthy that a coverage of 80 percent or greater has been achieved for all health regions in Honduras, with three regions immunizing more than 90 percent

of children. In Guatemala, none of the regions had exceeded 80 percent, and three regions had less than 70 percent coverage. In El Salvador all but 4 regions exceed 80 percent, but none had reached 90 percent, and Nicaragua exhibits a broad range in coverage with the autonomous northern and southern regions of the Atlantic coast (RAAN and RAAS regions) having less than 60 percent coverage.

Prevalence and Treatment of Diarrhea and Acute Respiratory Infections

In the four countries profiled in this report, the primary causes of infant and child morbidity and mortality are respiratory infections and diarrhea. As a result, the DHS and RHS surveys conducted in these countries have included modules that investigate the prevalence of these diseases, their severity, and what was done to treat children with a recent episode of diarrhea or acute respiratory infection.

Addressing diarrhea first, according to the results of the last survey conducted in each country, from 13.1 percent (Nicaragua) to 22.5 percent (Honduras) of children under age 5 were reported to have had diarrhea during the two weeks prior to interview (Table 9.5 and Graph 9.5). The difference in prevalence may be due to

Table 9.5
Percentage of Children With Diarrhea During the Two Weeks Prior to Interview, By Area of Residence: Children Less Than 5 Years of Age (Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	13.9	11.7	15.9
Guatemala	2002	22.2	15.8	25.4
Honduras	2001	22.5	21.1	23.4
Nicaragua	2001	13.1	11.7	14.4

when fieldwork was conducted in each country, or to the living conditions in each country, or both. It is difficult to distinguish which is more important here. In all of the countries, rural prevalence rates exceed urban rates, with Guatemala presenting an urban/rural differential of almost 10 percentage points.

Graph 9.5
Percentage of Children With Diarrhea During the Two Weeks Prior to Interview, By Area of Residence: Children Less Than Five Years of Age (Most Recent Survey)

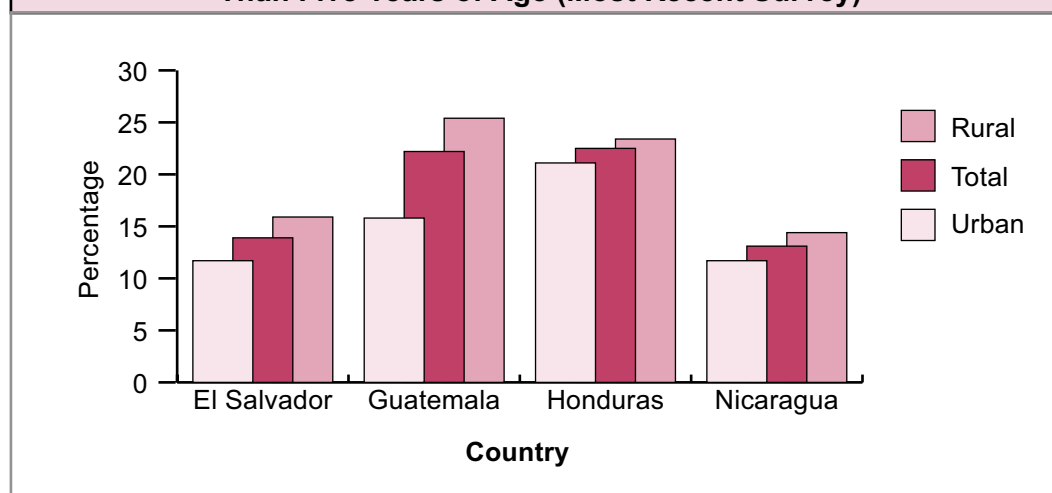
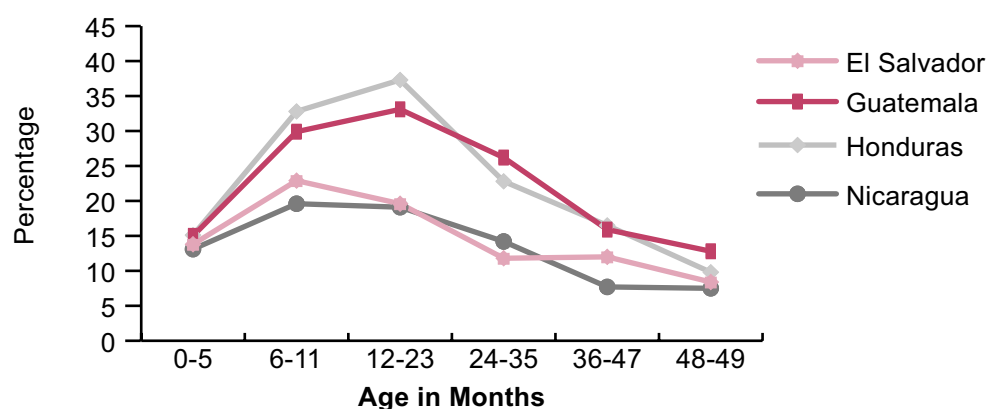


Table 9.6
Percentage of Children With Diarrhea During
the Two Weeks Prior to Interview, By Age of Child (In Months):
Children Less Than 5 Years of Age (Most Recent Survey)

Country	Year of Survey	Total	Age of Child					
			0-5	6-11	12-23	24-35	36-47	48-59
El Salvador	2002/03	13.8	13.8	22.9	19.6	11.8	12.0	8.4
Guatemala	2002	22.2	15.0	29.9	33.1	26.2	15.9	12.8
Honduras	2001	22.5	15.1	32.8	37.3	22.8	16.5	9.8
Nicaragua	2001	13.1	13.1	19.6	19.1	14.2	7.7	7.5

Graph 9.6
Percentage of Children With Diarrhea, By Age of Child (In
Months): Children Less Than 5 Years of Age
(Most Recent Survey)



In general, prevalence rates are lowest among children aged 0–5 months and highest among children aged 12–23 months (Table 9.6 and Graph 9.6), possibly reflecting a beneficial effect of breastfeeding among the younger

age group. As children 6–11 months of age are weaned and are exposed to other foods and become more active in contaminated environments, the prevalence of diarrhea begins to increase.

From 41 to 50 percent of the mothers with a child who had a recent episode of diarrhea consulted with someone about the disease (Table 9.7). The urban/rural differential in each country was small, but urban mothers were more likely to consult with someone than rural mothers. In El Salvador and Honduras, the probability of consulting with someone increased as the duration and severity of the diarrhea increased (data not shown).

Table 9.7
Percentage of Children Less Than 5 Years of Age With Diarrhea During the Two Weeks Prior to Interview, Whose Mothers Consulted With Someone About Their Recent Episode of Diarrhea, By Area of Residence: Children Less Than 5 Years of Age (Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	50.4	57.0	46.2
Guatemala*	2002	41.6	46.6	40.1
Honduras	2001	48.8	51.4	47.1
Nicaragua*	2001	44.1	45.4	43.1

* Includes only health providers.

As shown in Table 9.8 and Graph 9.7, the percentage of children with diarrhea who were treated with oral rehydration salts (ORS) was highest in El Salvador (51.4 percent) and Nicaragua (50.0 percent), and lowest in Guatemala (33.8 percent) and Honduras (29.6 percent). In Guatemala and Honduras, use of ORS was greater in the rural area than in the urban area. Between the last two surveys, use of ORS increased slightly in El Salvador and Guatemala, remained about the same in Honduras, and decreased slightly in Nicaragua (data not shown).

Table 9.8
Percentage of Children With Diarrhea During the Two Weeks Prior to Interview, Whose Mothers Treated Them With Oral Rehydration Salts, By Area of Residence: Children Less Than 5 Years Of Age (Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	51.4	55.0	49.0
Guatemala	2002	33.8	32.2	34.3
Honduras	2001	29.6	18.6	36.6
Nicaragua	2001	50.0	53.9	45.7

Graph 9.7
Percentage of Children With Diarrhea Who Were Treated With Oral Rehydration Salts, By Area of Residence: Children Less Than Five Years of Age (Most Recent Survey)

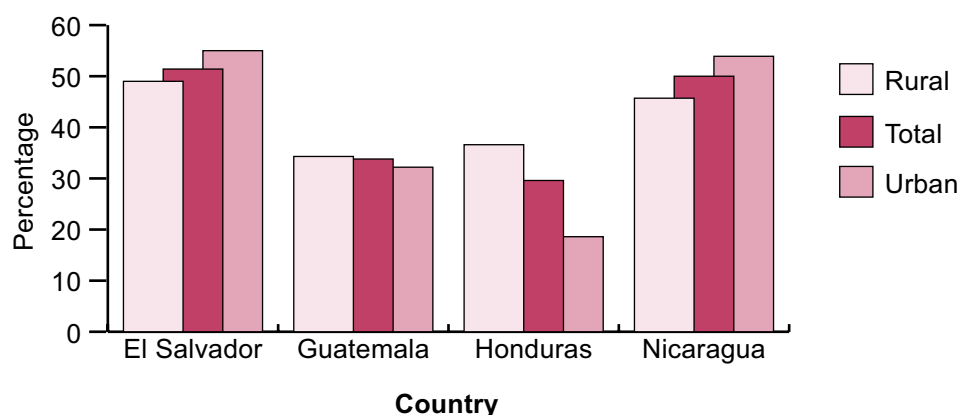
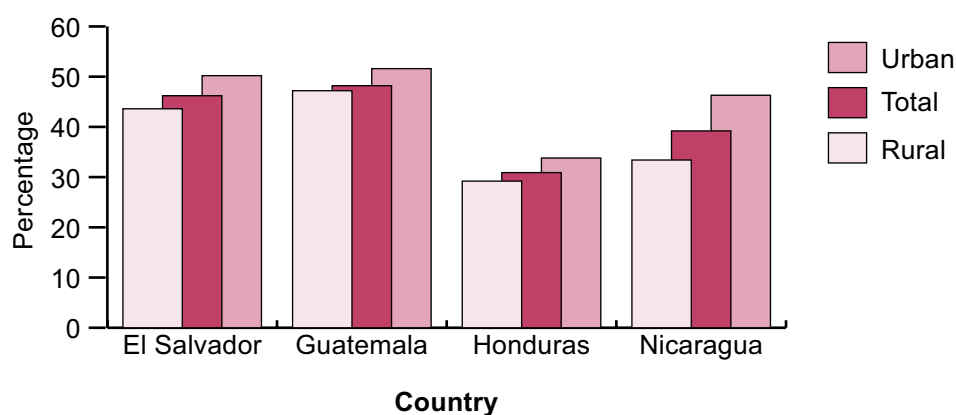


Table 9.9
Percentage of Children With Diarrhea
During the Two Weeks Prior to
Interview, Whose Mothers Increased
the Amount of Liquids Given to
Them During Their Recent Episode
of Diarrhea, By Area of Residence:
Children Less Than 5 Years of Age
(Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	46.2	50.2	43.6
Guatemala	2002	48.2	51.6	47.2
Honduras	2001	30.9	33.8	29.2
Nicaragua	2001	39.2	46.3	33.4

Graph 9.8
Percentage of Children With Diarrhea Who Were Given More Liquids
By Their Mothers, By Area of Residence: Children Less Than Five
Years of Age (Most Recent Survey)



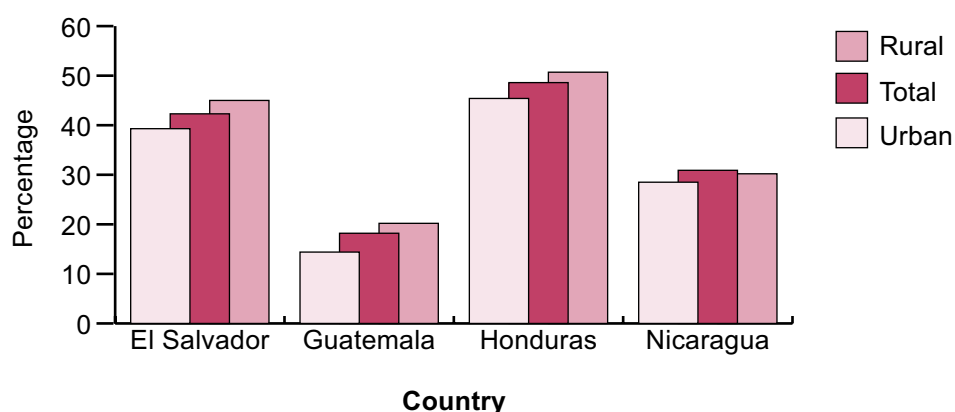
In all of the countries, less than 50 percent of the mothers increased the amount of liquids that they gave to their children with diarrhea (Table 9.9 and Graph 9.8). The probability of increasing liquids was highest in Guatemala (48.2 percent)

and lowest in Honduras (30.9 percent). As shown in the graph, a higher percentage of urban mothers increased the amount of liquids given to their children than rural mothers.

Table 9.10
Percentage of Children With
Respiratory Infections During the
Two Weeks Prior to Interview,
By Area of Residence: Children Less
Than 5 Years of Age
(Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	42.3	39.3	45.0
Guatemala	2002	18.2	14.4	20.2
Honduras	2001	48.6	45.4	50.7
Nicaragua	2001	30.9	28.5	30.2

Graph 9.9
Percentage of Children With Respiratory Infections During the
Two Weeks Prior to Interview, By Area of Residence: Children
Less Than Five Years of Age (Most Recent Survey)



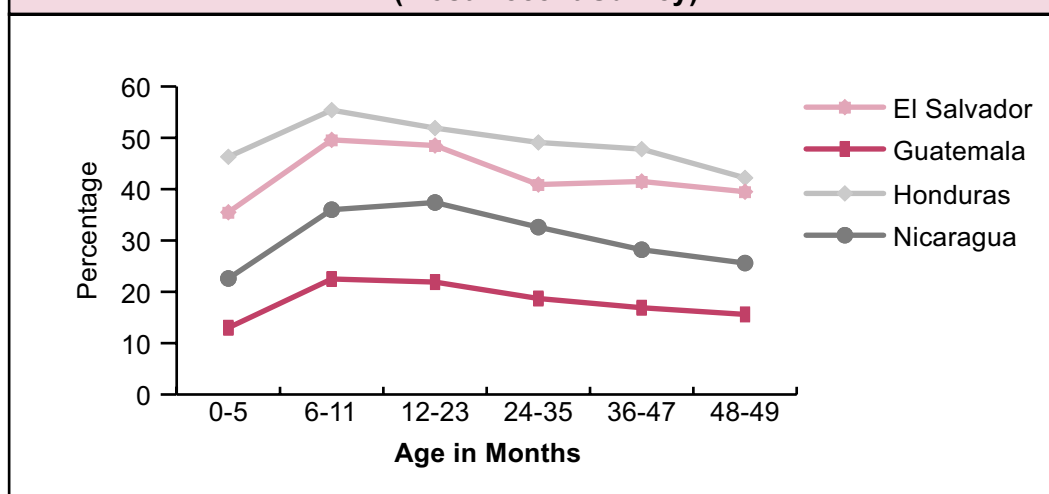
Turning to acute respiratory infections (ARI), the prevalence of ARI varied considerably across the four countries (Table 9.10 and Graph 9.9). The variance may be due to when the last survey was conducted in each country. While Guatemala

reported the lowest prevalence of ARI (18.2 percent), Honduras reported the highest (48.6 percent). As expected, prevalence of ARI was highest in the rural areas of each country, but the urban/rural differences are small.

Table 9.11
Percentage of Children With Respiratory Infections During
the Two Weeks Prior to Interview, By Age of Child (In Months):
Children Less Than 5 Years of Age (Most Recent Survey)

Country	Year of Survey	Total	Age of Child					
			0-5	6-11	12-23	24-35	36-47	48-59
El Salvador	2002/03	42.3	35.5	49.6	48.5	40.9	41.5	39.5
Guatemala	2002	18.2	13.0	22.5	21.9	18.7	16.9	15.6
Honduras	2001	48.6	46.3	55.4	51.9	49.1	47.8	42.2
Nicaragua	2001	30.9	22.6	36.0	37.4	32.6	28.2	25.6

Graph 9.10
Percentage of Children With Respiratory Infections,
By Age of Child (In Months): Children Less Than 5 Years of Age
(Most Recent Survey)



As was the case with diarrhea, prevalence of ARI was lowest among children aged 0–5 months, again reflecting the protective effect of

breastfeeding (Table 9.11 and Graph 9.10). In general, the highest prevalence was recorded for children aged 6–11 months, followed closely by children aged 12–23 months.

Table 9.12
Percentage of Children Less Than 5 Years of Age With Respiratory Infections During the Two Weeks Prior to Interview, Whose Mothers Consulted With Someone About Their Illness, By Area of Residence: Children Less Than 5 Years of Age (Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	61.6	74.3	52.0
Guatemala*	2002	64.3	78.9	59.0
Honduras	2001	52.0	57.0	48.5
Nicaragua*	2001	57.4	64.4	51.0

* Includes only health providers.

From 52.0 to 64.3 percent of the mothers with a child with a recent episode of ARI consulted with someone about the disease (Table 9.12). Unlike diarrhea, the urban/rural differential in each country was relatively large, reaching almost 20 percentage points in Guatemala. In El Salvador, the probability of consulting with someone increased as the duration and severity of the ARI increased, but in Honduras, more mothers of children with a moderate episode of ARI consulted with someone than those with children experiencing a severe case of ARI (data not shown).

Table 9.13
Percentage of Children Less Than 5 Years of Age With Respiratory Infections During the Two Weeks Prior to Interview, Who Were Treated With Antibiotics, By Area of Residence (Most Recent Survey)

Country	Year of Survey	Total	Urban	Rural
El Salvador	2002/03	52.9	61.4	46.4
Guatemala	2002	na	na	na
Honduras	2001	25.5	34.3	19.3
Nicaragua	2001	na	na	na

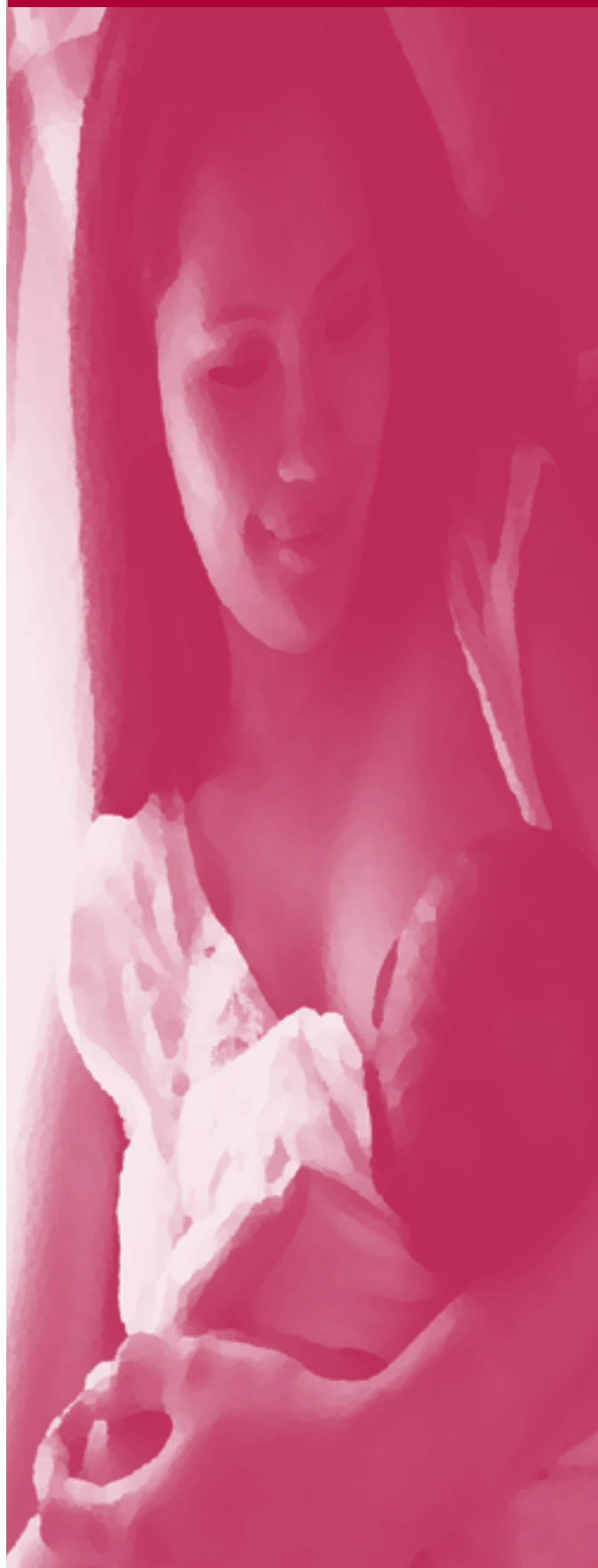
na: Not available.

As shown in Table 9.13, the use of antibiotics to treat ARI was relatively high in El Salvador (52.9 percent) and relatively low in Honduras (25.5 percent). In El Salvador, almost 40 percent of children who were classified with having only a cold were given antibiotics, while in Honduras, 20 percent of the children with a mild form of ARI were treated with antibiotics (data not shown). On the other hand, a sizeable proportion of children in both countries with a severe ARI were not treated with antibiotics. It appears that there is inappropriate use of antibiotics in both countries.

Summary of Findings

- Less than 87 percent of live births are weighed at birth or during the 7 days following birth. This proportion decreases to less than 80 percent among live births occurring to rural women.
- Over 90 percent of live births in El Salvador and Honduras received well-baby care, compared to 43.2 percent of live births in Guatemala. Urban/rural differentials are small in El Salvador and Honduras, but about 17 percentage points in Guatemala.
- Full childhood immunization of children age 12–23 months varies from 62.5 percent in Guatemala to 77.7 percent in Honduras. Missing the third dose of vaccine in the polio and DPT series and the measles vaccine altogether are probably the reasons that complete immunization levels are relatively low in the four countries. The fact that urban and rural immunization coverage within each country is relatively similar is a good example of improving equity in access to this service.
- Prevalence of diarrhea and acute respiratory infections (ARI) varies from country to country, and may be due to the time of year the last survey was conducted in each country. As expected, prevalence of both diseases was higher in rural than in urban areas. Breastfeeding appears to provide some protection against both diseases in children aged 0–5 months.
- The probability that a mother would consult with someone if the child was sick is greater if the child was suffering from an ARI than from a bout of diarrhea.
- The use of oral rehydration salts is low in the countries examined, as is increasing the amount of liquids given to children with diarrhea. Both issues need to be addressed in future public education campaigns, particularly in Guatemala and Honduras.
- The data suggest that there may be inappropriate use of antibiotics to treat ARIs in some of the countries.

CHAPTER 10



Infant Feeding Practices and Nutrition Status of Children

This chapter covers three topics: breastfeeding of infants, nutritional status of children, and anemia in children and mothers.

Breastfeeding

Infant feeding practices influence the health of both the child and the mother. Breastfeeding is a primary determinant of an infant's nutritional status and its susceptibility to morbidity. Early initiation of breastfeeding permits the newborn to benefit immediately from colostrum, which is highly nutritious and contains the antibodies necessary to protect babies from infection before their immune systems are fully mature. The health of a woman is also affected by breastfeeding because it delays the return of ovulation and provides a period of time in which she is not susceptible to the risk of another pregnancy.

Table 10.1 and Graph 10.1 show that 94 percent or more of infants were breastfed, according to the last survey. In all of the countries, the percent of children who were breastfed has exceeded 90 percent since the early 1990s. In Nicaragua, 76.3 percent of infants were breastfed within the first hour, followed by Guatemala at 60.1

percent. The percentage of children breastfed within the first hour following birth is relatively low in Honduras (48.9 percent) and El Salvador (31.8 percent). In Nicaragua, Honduras, and Guatemala, over 80 percent of the children are breastfed within the first day, while only 60.2 percent of children are in El Salvador.

Table 10.1
Trends in the Initiation of Breastfeeding: Live Births in the 5 Years Prior to the Survey

Country	Year of Survey	Ever Breastfed	Within First Hour	Within First Day*
El Salvador	1993	91.2	13.6	37.9
El Salvador	1998	94.0	26.3	56.1
El Salvador	2002/03	94.4	31.8	60.2
Guatemala	1995	95.6	54.6	76.5
Guatemala	1998/99	96.5	48.5	77.0
Guatemala	2002	96.1	60.1	80.2
Honduras	1991/92	na	38.0	88.6
Honduras	1996	96.0	43.4	76.9
Honduras	2001	95.7	48.9	81.5
Nicaragua	1992/93	91.9	40.5	66.2
Nicaragua	1998	92.4	79.5	87.0
Nicaragua	2001	94.5	76.3	86.8

* Includes children breastfed in the first hour.

na: Not available.

Graph 10.1
Initiation of Breastfeeding: Live Births in the Five Year Period Prior to the Most Recent Survey

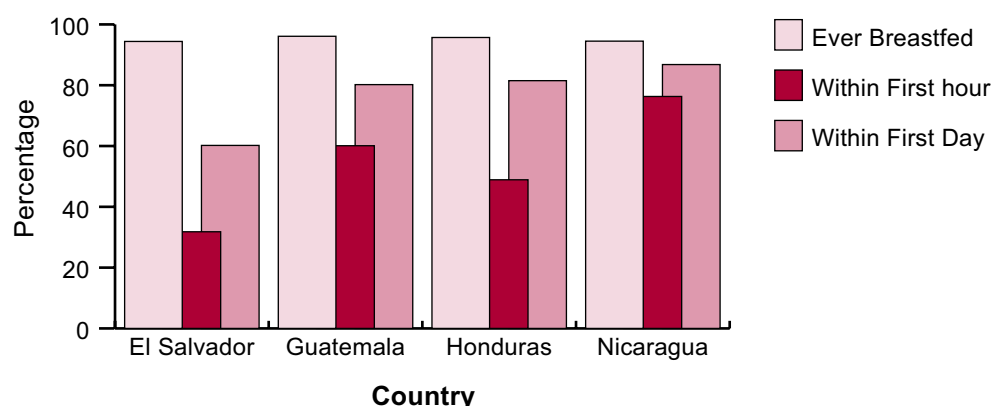


Table 10.2 and Graph 10.2 show data on the mean durations of breastfeeding. The duration of any breastfeeding, according to the last survey, is highest in Guatemala (20.5 months) and lowest in Honduras and Nicaragua (17.6 months). The durations of full breastfeeding

(either exclusive breastfeeding or breastfeeding with water or liquids other than milk) were between 3.1 months in El Salvador and 4.1 months in Guatemala. The duration of exclusive breastfeeding ranges between 1.4 and 3.5 months. As expected, the percentage of children who are

Table 10.2
Trends in the Mean Duration of Breastfeeding (in months): Live Births in the 5 Years Prior to the Survey

Country	Year of Survey	Any Breastfeeding	Full Breastfeeding*	Exclusive Breastfeeding†
El Salvador	1993	15.5	2.8	0.8
El Salvador	1998	17.7	2.7	0.9
El Salvador	2002/03	19.2	3.1	1.4
Guatemala	1995	19.8	4.4	3.9
Guatemala	1998/99	19.9	3.7	3.4
Guatemala	2002	20.5	4.1	3.5
Honduras	1991/92	17.2	na	na
Honduras	1996	17.3	3.4	2.3
Honduras	2001	17.6	3.9	2.3
Nicaragua	1992/93	12.3	2.0	0.6
Nicaragua	1998	15.0	2.6	2.1
Nicaragua	2001	17.6	3.5	2.5

* Includes breastmilk alone, or breastmilk with water or other liquids but not including other types of milk.

† Just breastmilk.

na: Not available.

Graph 10.2
Mean Duration of Breastfeeding (In Months): Live Births in the Five Years Prior to the Most Recent Survey

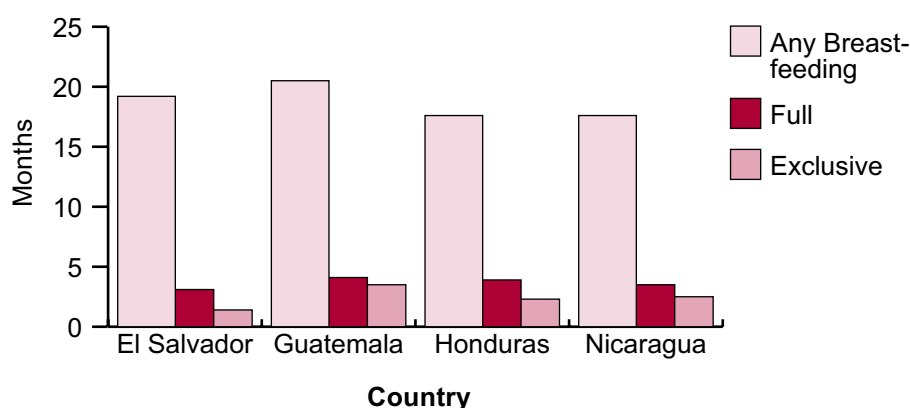


Table 10.3
Percentage of Children Who
are Currently Being Exclusively
Breastfed, According to Age of
Child in Months
(Most Recent Survey)

Country/Age	Year of Survey	Percentage
El Salvador	2002/03	
0–1		36.8
2–3		22.1
4–5		8.1
6–7		2.7
Guatemala	2002	
0–2		61.2
3–5		40.6
6–8		12.3
Honduras	2001	
0–2		47.2
3–5		21.6
6–8		6.1
Nicaragua	2001	
0–1		46.9
2–3		33.6
4–5		12.0
6–7		3.2

being exclusively breastfed decreases rapidly as the age of the children increases (Table 10.3). In El Salvador and Nicaragua, by the time children are 4–5 months of age, only 8.1 and 12.0 percent, respectively, are being exclusively breastfed.

Children were classified into one of several feeding categories based on current feeding practices, as reported by their mothers, according to age groupings that correspond to World Health Organization (WHO) infant feeding indicators. The categories are shown in Table 10.4, where children are classified as to whether they are not being breastfed, whether they are exclusively breastfed, predominantly breastfed, given complementary foods (breast milk and solid or semisolid foods), and whether children are still being breastfed at 12 to 15 months and 20–23 months.

As shown in Table 10.4, in Guatemala, nearly all children aged 0–5 months are breastfed (94.5

percent), while in Honduras less than 90 percent are breastfed at these ages. Rates of exclusive breastfeeding among children aged 0–5 months range from a low of 24.0 percent in El Salvador to a high of 50.6 percent in Guatemala, rates far from the ideal. Predominant breastfeeding ranges from 14.9 percent in Nicaragua to 22.1 percent in El Salvador. Focusing on infants 6–9 months of age, more than 60 percent of infants in this age group are given complementary foods in addition to breast milk, as is recommended from the age of 6 months onward. For children 12–15 months of age, the indicator of main interest is the proportion of children still breastfeeding, also known as the first-year breastfeeding continuation rate. Guatemala has the highest first-year continuation rate (81.1 percent) compared with the other countries. The percentage of children 20–23 months who are still breastfeeding ranges from a low of 33.5 percent in Honduras to a high of 47.4 percent in Guatemala.

As expected, the percentage of children aged 0–5 months being breastfed and exclusively breastfed is higher in the rural area than in the urban area. This reflects in part the need for urban mothers to return to the workplace more often than rural mothers and, therefore, begin weaning earlier. Among children aged 6–9 months, a higher percentage of rural children than urban children receive complementary foods. This reflects the greater likelihood that urban infants are weaned somewhat earlier than rural infants. Similarly, first-year continuation rates are higher in the rural area than in the urban area, as are the percentage of children who continue to breastfeed at ages 20–23 months, reflecting again the fact that urban children are weaned earlier.

Nutrition Status of Children

In order to objectively assess the nutritional status of children, the height and weight of children were measured in the surveys. Those measurements, in conjunction with a child's age, allowed for the calculation of three standard measures of physical growth: height-for-age, weight-for-height, and weight-for-age.

Table 10.4
Type of Breastfeeding (Indicators of the World Health Organization), According to
Area of Residence, by Age of Child (In Months): Children Aged 0–23 Months
(Most Recent Survey)

Country/ Area	Year of Survey	Not Breastfeeding		Exclusive Breastfeeding		Predominant Breastfeeding		Complementary Breastfeeding	Continued Breastfeeding	
		0–3	0–5	0–3	0–5	0–3	0–5	6–9	12–15	20–23
El Salvador	2002/03									
Total		5.6	8.0	29.5	24.0	23.9	22.1	75.9	67.4	43.2
Urban		7.6	11.2	24.5	18.7	26.4	23.9	75.0	57.1	36.5
Rural		3.6	4.4	34.4	29.8	21.5	20.1	76.8	75.5	50.6
Guatemala	2002									
Total		4.6	5.5	56.3	50.6	18.8	19.2	67.3	81.1	47.4
Urban		9.1	11.0	35.3	34.7	30.5	25.7	61.8	76.8	40.3
Rural		2.5	2.7	65.8	58.5	13.5	15.9	70.3	83.4	51.3
Honduras	2001									
Total		7.7	10.5	43.3	34.9	15.5	16.4	60.6	75.8	33.5
Urban		12.9	18.0	32.0	22.7	12.4	13.6	55.1	67.2	27.0
Rural		4.3	5.5	50.7	43.2	17.5	18.3	64.7	80.7	38.1
Nicaragua	2001									
Total		5.4	7.4	39.1	30.7	15.3	14.9	67.4	63.8	39.6
Urban		8.2	10.5	28.8	21.6	13.7	13.5	62.6	54.3	36.3
Rural		2.8	4.2	48.9	40.3	16.8	16.3	73.3	74.1	42.5

The nutritional status of children as measured by these indices can be evaluated by comparing their distributions on a specific index to that of a well-nourished, healthy population of children. The reference population used is that developed by the U.S. National Center for Health Statistics (NCHS) and accepted by the World Health Organization (WHO).

Height-for-age is a measure of physical growth over the child's life. A child whose height is more than 2 standard deviations below the mean of the NCHS reference population is considered stunted or very short for his or her age. Stunting is a condition that results from prolonged inadequate food intake or from recurrent episodes of illness.

Weight-for-height indicates the appropriateness of a child's weight given his/her height. A child whose weight is more than 2 standard deviations below the NCHS reference mean is referred to as wasted or too thin. This condition may reflect a recent period of inadequate food intake or a recent episode of illness.

Weight-for-age is a general indicator of a child's nutritional status. A child who falls more than 2 standard deviations below the NCHS reference mean on this index is referred to as underweight. The child may have suffered from chronic malnutrition (stunting) or acute malnutrition (wasting), but the index does not distinguish between those conditions.

Table 10.5
Percent of Children Classified as Undernourished by Three
Anthropometric Indices*, According to Area of Residence:
Children Aged 3–59 Months
(Most Recent Survey)

Country/Area	Year of Survey	Stunted (height-for-age)	Wasted (weight-for-height)	Underweight (weight-for-age)
El Salvador	2002/03			
Total		18.9	1.4	10.3
Urban		11.0	1.3	6.9
Rural		25.6	1.4	13.2
Guatemala	2002			
Total		49.3	1.6	22.7
Urban		36.5	1.2	16.2
Rural		55.5	1.8	25.9
Honduras	2001			
Total		29.2	1.0	16.6
Urban		17.6	0.6	9.1
Rural		36.4	1.2	21.3
Nicaragua†	2001			
Total		20.2	2.0	9.6
Urban		12.0	1.3	6.1
Rural		28.8	2.7	13.2

* Percentages are for children at least 2 standard deviations below the median of the NCHS/CDC/WHO International Growth Reference Population (WHO, 1995).

† 0 to 59 months

Graph 10.3
Percentage of Children Classified as Low Height-for-age, Low
Weight-for-height and Low Weight-for-age: Children Aged 3–59 Months
(Most Recent Survey)

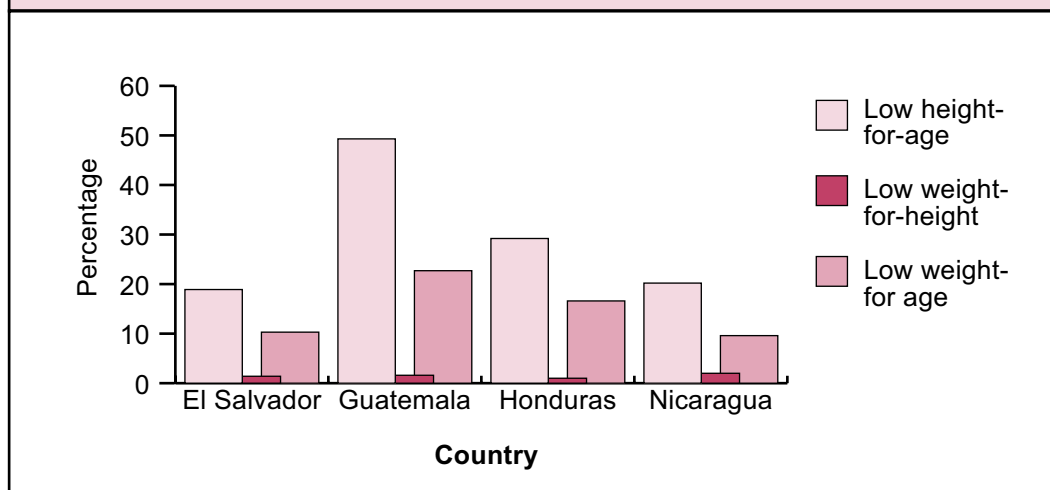


Table 10.5 and Graph 10.3 show the three indices of nutritional status for children aged 3–59 months, according to the last survey. The

statistic shown for each index is the percentage of children who were more than 2 standard deviations below the mean value for the NCHS reference population.

In El Salvador and Nicaragua, 18.9 and 20.2 percent of children were classified as stunted while 29.2 and 49.3 percent were stunted in Honduras and Guatemala, respectively. The percentage of children suffering wasting ranged from a low of 1.0 percent in Honduras to a high of 2.0 percent in Nicaragua, while the percentage of children found to be underweight ranged from a low of 9.6 percent in Nicaragua to a high of 22.7 percent in Guatemala. In general, it is

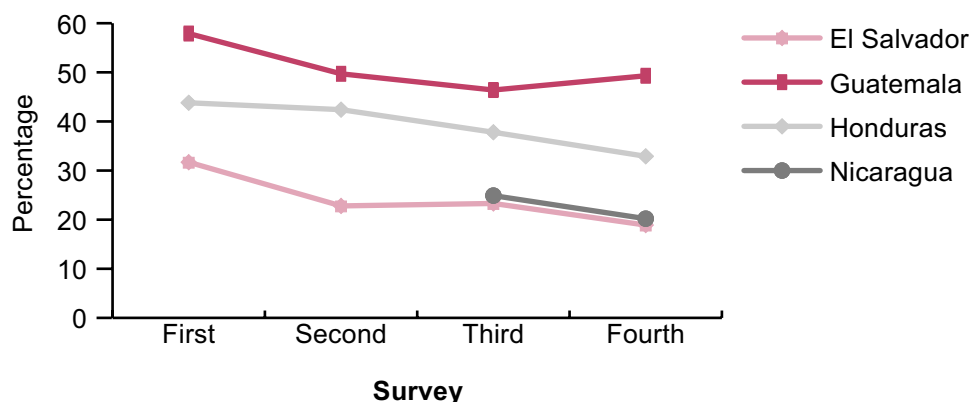
quite clear that substantially more children were classified as undernourished in Guatemala than in the other countries.

In general, the nutritional status of children has improved in each of the countries since the late 1980s (Table 10.6 and Graphs 10.4 and 10.5). For example, the percentage of children classified as stunted in El Salvador decreased by almost 13 percentage points between 1988

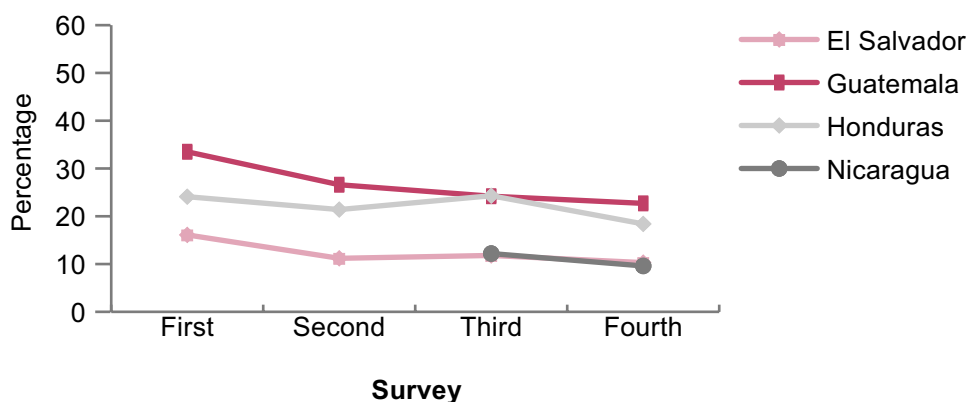
Table 10.6
Trends in the Percentage of Children Classified as
Undernourished by Three Anthropometric Indices*: Children
Aged 3–59 Months

Country	Year of Survey	Stunted (height-for-age)	Wasted (weight-for-height)	Underweight (weight-for-age)
El Salvador	1988	31.7	2.1	16.1
El Salvador	1993	22.8	1.3	11.2
El Salvador	1998	23.3	1.1	11.8
El Salvador	2002/03	18.9	1.4	10.3
Guatemala	1987	57.9	na	33.5
Guatemala	1995	49.7	3.3	26.6
Guatemala	1998/99	46.4	2.5	24.2
Guatemala	2002	49.3	1.6	22.7
Honduras	1987†	43.8	1.9	24.1
Honduras	1991/92†	42.4	1.8	21.4
Honduras	1996†	37.8	1.4	24.3
Honduras	2001†	32.9	1.0	18.4
Nicaragua	1998‡	24.9	2.2	12.2
Nicaragua	2001‡	20.2	2.0	9.6
* Percentages are for children at least 2 standard deviations below the median of the NCHS/CDC/WHO International Growth Reference Population (WHO, 1995).				
† Children aged 12–59 months.				
‡ 0 to 59 months				

Graph 10.4
Trends in the Percentage of Children Classified as Low Height-for-Age, According to Last Four Surveys: Children Aged 3–59 Months (12–59 Months for Honduras)



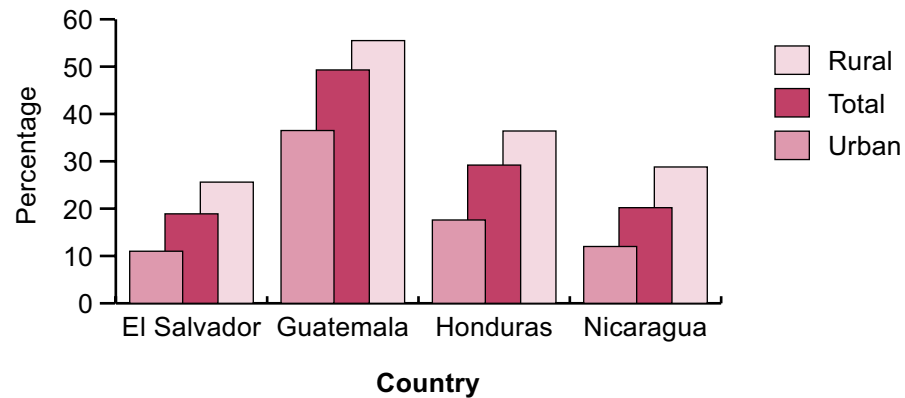
Graph 10.5
Trends in the Percentage of Children Classified as Low Weight-for-Age, According to Last Four Surveys: Children Aged 3–59 Months (12–59 Months for Honduras)



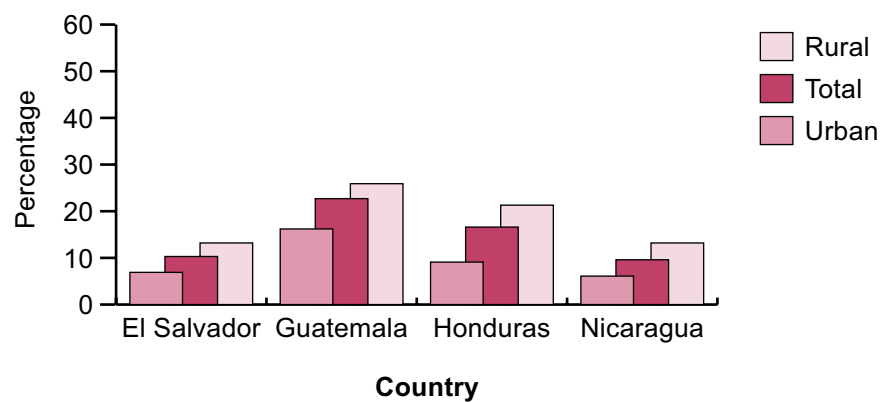
and 2002/03. In Honduras, the decrease was almost 11 percentage points between 1987 and 2001. In Guatemala, the percentage of children found to be underweight decreased by almost 11 percentage points since 1987, but it appears that there has been difficulty since 1995 in reducing the percentage of children who are stunted.

In terms of the stunting index or low height-for-age, greater levels of malnutrition are evident among children in rural as opposed to urban areas (Graph 10.6). Levels of underweight also tend to be greater among children who reside in rural areas (Graph 10.7).

Graph 10.6
Percentage of Children Classified as Low Height-for-Age,
By Area of Residence: Children Aged 3–59 Months
(Most Recent Survey)



Graph 10.7
Percentage of Children Classified as Low Weight-for-Age,
By Area of Residence: Children Aged 3–59 Months
(Most Recent Survey)



Maps 10.1 and 10.2 illustrate regional variations within countries in the percent of children classified as low height-for-age (stunted) and low weight-for-age (underweight). Using either indicator, most areas of Guatemala experience high levels of malnutrition. Western Honduras appears to be worse off than the rest of the country and Nicaragua experiences the most severe problems in the northeast part of the country. El Salvador is generally better throughout, as is the Pacific coast of Nicaragua.

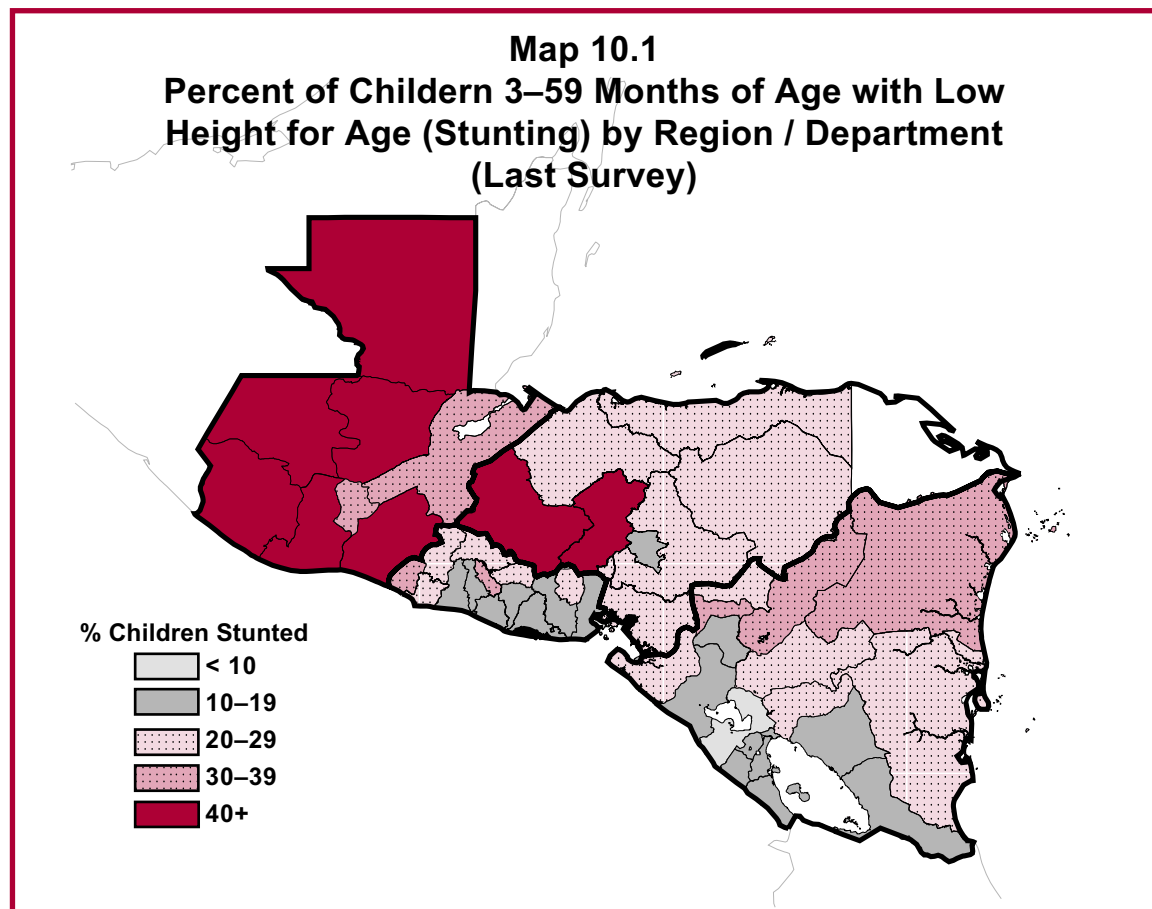
Anemia in Children

Anemia is a condition characterized by inadequate red blood cell volume and a low concentration of hemoglobin in the blood. Although many causes of anemia have been identified, nutritional

deficiency, primarily due to a lack of dietary iron, accounts for most cases. According to the World Health Organization, 43 percent of young children are affected by anemia worldwide.

Iron-deficiency anemia in children is associated with impaired cognitive performance, motor development, coordination, language development, and scholastic achievement. Anemia increases morbidity from infectious diseases because it adversely affects several immune mechanisms.

There are several ways to improve iron status in children. A long-term goal is overall nutritional improvement through selection of iron-rich foods. Fortification of staples with iron allows increased iron intake with the usual diet, or children can be given either liquid or tablet supplements.



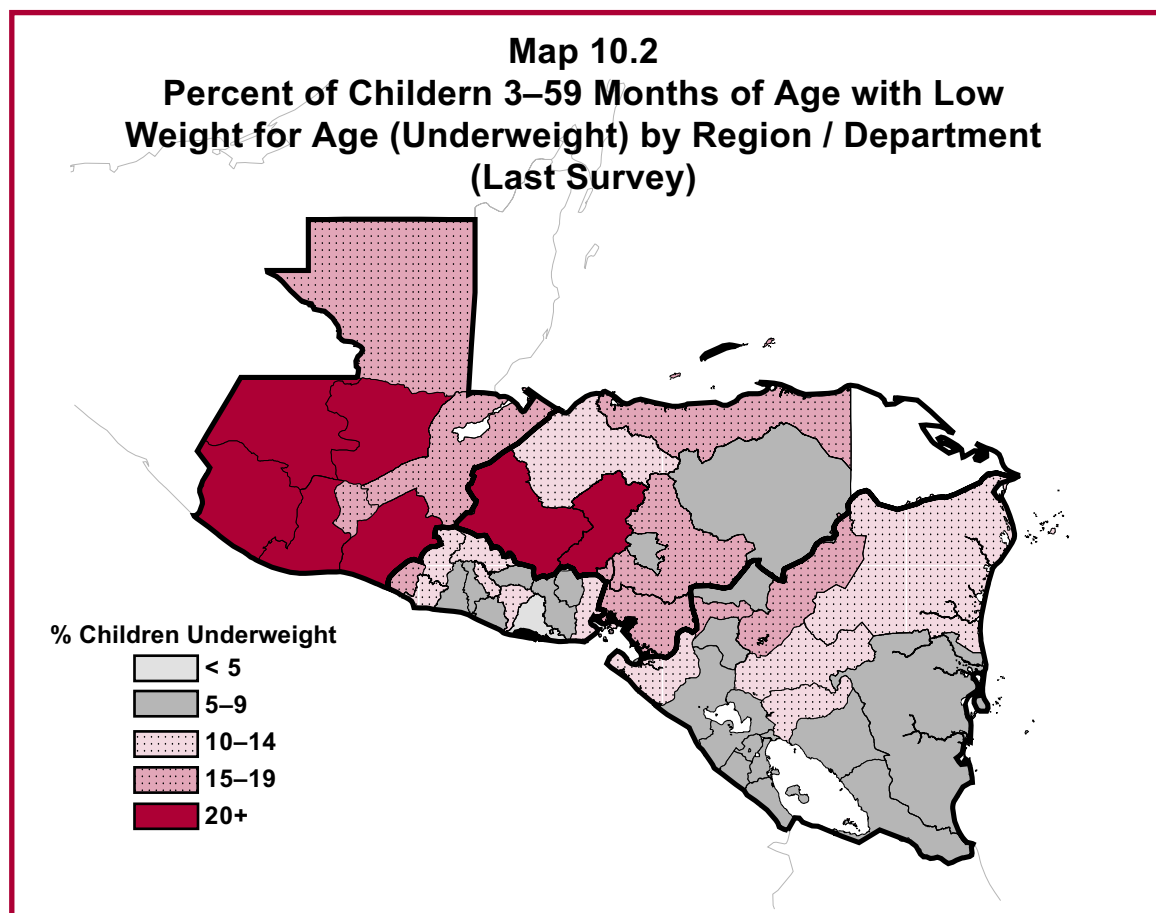
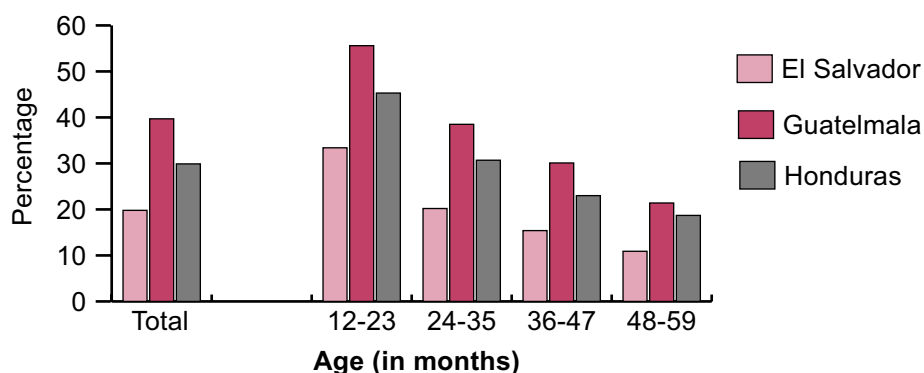


Table 10.7 Percentage of Children With Anemia, According to Selected Characteristics: Children Aged 12–59 Months (Most Recent Survey)				
Selected Characteristics	El Salvador 2002/03	Guatemala* 2002	Honduras 2001	Nicaragua 2001
Total	19.8	39.7	29.9	na
Area of Residence				
Urban	15.8	35.2	29.4	na
Rural	23.1	41.8	30.2	na
Sex				
Male	21.1	41.2	30.5	na
Female	18.2	38.1	29.3	na
Age of Child				
12–23	33.4	55.6	45.3	na
24–35	20.2	38.5	30.7	na
36–47	15.4	30.1	23.0	na
48–59	10.9	21.4	18.7	na
Birth Order				
1	19.1	37.4	27.3	na
2–3	17.9	39.5	31.4	na
4–6	23.2	39.3	29.9	na
7+	22.9	42.4	30.8	na
na: Not available.				
* Children 6–59 months				

Table 10.7 presents anemia rates for children aged 12–59 months in El Salvador, Guatemala, and Honduras, according to the last survey conducted in each country. The highest overall rate of anemia was observed in Guatemala (39.7 percent) and the lowest in El Salvador (19.8 percent).

Anemia rates in each country vary according to area of residence, sex of the child and age of the child. The prevalence of anemia among children living in rural areas was higher than among children living in urban areas. Also, boys were more likely to be anemic than girls, but the differences are small. In all of the countries,

Graph 10.8
Percentage of Children With Anemia, By Age of Child (In Months):
Children Aged 12–59 Months



as the age of the children increases, the percent with anemia decreases (Graph 10.8). There are no significant differences in the anemia rates among children by their birth order.

As shown in Table 10.8, anemia rates tend to be lower among children whose mothers have 7 or more years of formal education and higher among children whose mothers have no formal education.

Table 10.8
Percentage of Children With Anemia,
According to Education of Mother:
Children Aged 12–59 Months
(Most Recent Survey)

Country/Education	Year of Survey	Percentage
El Salvador	2002/03	
Total		19.8
None		23.2
1–3		24.4
4–6		22.1
7–9		16.8
10+		12.9
Guatemala*	2002	
Total		39.7
None		41.4
Primary		41.3
Secondary+		28.9
Honduras	2001	
Total		29.9
None		33.1
1–3		30.0
4–6		31.8
7+		23.2
Nicaragua	2001	
Total		na
None		na
1–3		na
4–6		na
Secondary		na
Superior		na

na: Not available.

* Children 6–59 months

Anemia in Mothers

According to the World Health Organization, 35 percent of women are affected by anemia worldwide. The most common cause of iron deficiency anemia in women is menstrual blood loss. Pregnancy and breastfeeding also drain iron stores, and low dietary intake (or poor iron absorption) also plays a part. Most women are unaware of the symptoms of anemia—shortness of breath, fatigue, weakness, headaches, and lapses of concentration—and tend to attribute such mild symptoms to the stresses of modern life. Yet, if anemia remains undiagnosed, it can lead to infertility in women of childbearing age and premature delivery in pregnant women.

Tables 10.9 and 10.10 show the percentage of non-pregnant women aged 15–49 in El Salvador, Guatemala, and Honduras who are anemic. The

sampling methodology of the surveys was such that only women with at least one child aged 3–59 months were tested for anemia. The highest overall rate of anemia was found in Guatemala (20.2 percent) and the lowest in El Salvador (8.5 percent). In all three countries, mothers residing in rural areas were more likely to be anemic than mothers living in urban areas. As shown in Table 10.9, anemia rates vary according to age. The rates are relatively high among teenagers, then decline among women aged 20–29, only to increase among women aged 30–44. In general, women aged 45–49 present the lowest rates in each country. Finally, as expected, the percentage of women who are anemic decreases as the educational level of the women increases (Table 10.10). In Guatemala, the difference between women with no formal education and women with at least some secondary education is 13 percentage points.

Table 10.9 Percentage of Women With Anemia, According to Selected Characteristics: Non-Pregnant Women Aged 15–49 Years With Children Aged 3–59 Months (Most Recent Survey)				
Selected Characteristics	El Salvador 2002/03	Guatemala 2002	Honduras 2001	Nicaragua 2001
Total	8.5	20.2	14.7	na
Area of Residence				
Urban	8.2	16.5	13.9	na
Rural	8.8	22.3	15.2	na
Age				
15–19	8.8	28.1	14.3	na
20–24	7.7	18.2	13.8	na
25–29	6.9	17.1	12.7	na
30–34	9.8	23.7	17.0	na
35–39	9.4	20.0	18.0	na
40–44	13.6	20.9	15.7	na
45–49	8.7	16.2	10.1	na
na: Not available.				

Table 10.10
Percentage of Women With
Anemia, According to Education:
Non-Pregnant Women Aged 15–49
Years With Children Aged 3–59
Months (Most Recent Survey)

Country/Education	Year of Survey	Percentage
El Salvador	2002/03	
Total		8.5
None		7.7
1–3		9.3
4–6		10.0
7–9		9.8
10+		5.6
Guatemala	2002	
Total		20.2
None		24.7
Primary		20.5
Secondary+		11.2
Honduras	2001	
Total		14.7
None		18.7
1–3		15.3
4–6		14.2
7+		12.8
Nicaragua	2001	
Total		na
None		na
1–3		na
4–6		na
Secondary		na
Superior		na
na: Not available.		

Summary of Findings

- In all of the countries, more than 94 percent of infants were breastfed. The percentage of infants who were breastfed within the first hour after birth ranged from a low of 31.8 percent in El Salvador to a high of 76.3 percent in Nicaragua. Similarly, the percentage of children who were breastfed within the first day ranged from a low of 60.2 percent in El Salvador to a high of 86.8 percent in Nicaragua.
- Exclusive breastfeeding rates indicate that the practice is far from ideal. The fact that predominant breastfeeding rates are low indicates many children are receiving complementary foods earlier in life than is recommended by the WHO.
- Anthropometric measures of physical growth were presented to assess the nutritional status of children. Significant differences were found between Guatemala and the other three countries. Stunting ranged from a low of 18.9 percent in El Salvador to a high of 49.3 percent in Guatemala, while levels of underweight children ranged from a low of 9.6 percent in Nicaragua to a high of 22.7 percent in Guatemala.
- Although the nutritional status of children has improved in each of the countries since the late 1980s, important urban/rural differentials in favor of the urban area still exist.
- The percentage of children aged 12–59 months with anemia in El Salvador, Guatemala, and Honduras is 19.8, 39.7 and 29.9 percent, respectively, while the percentage of women aged 15–49 with anemia is 8.5, 20.2 and 14.7 percent, respectively. For both groups, the prevalence of anemia is higher in the rural area than in the urban area.

CHAPTER 11



Educational Status of Children Aged 7–14 Years

E ducation is one of the principal determinants of the economic and social development of a country. The last surveys conducted in El Salvador, Guatemala, and Honduras presented an opportunity to provide basic information on the education system of these countries from a population-based perspective. With this objective, the individual questionnaire included a module of questions regarding school attendance by the respondents' own children aged 7–14. For each child in the appropriate age range, the mother was asked if the child had ever attended school, the age at which he/she began first grade, the highest grade completed, and whether the child was attending in the current school year. For those children not in school, the mother was asked the age when the child last attended and his/her reason for leaving school.

Tables 11.1 thru 11.3 give a profile of school attendance during the current school year for El Salvador, Guatemala, and Honduras, respectively. The children were classified in the following four categories: Those who had

never attended school; those who had dropped out of school system; those who were currently attending a grade lower than expected for their age; and those who were attending a grade equal to or higher than the one expected for their age.

Table 11.1 Educational Status of Children Aged 7–14 Years, According to Selected Characteristics: El Salvador, 2002/03					
Selected Characteristics	Never Attended	Dropped Out	In Grade Less Than Expected	In Expected Grade or Higher	Total
Total	5.6	6.0	26.7	61.7	100.0
Area of Residence					
Urban	4.1	3.9	19.9	72.1	100.0
Rural	7.1	7.9	33.0	51.9	100.0
Sex					
Male	5.8	5.3	29.0	59.9	100.0
Female	5.5	6.7	24.1	63.7	100.0
Age					
7	14.6	0.7	0.0	84.7	100.0
8	7.0	1.2	19.4	72.4	100.0
9	3.8	1.8	27.7	66.7	100.0
10	4.3	2.6	34.9	58.2	100.0
11	3.2	4.3	34.9	57.6	100.0
12	3.6	8.5	35.8	52.1	100.0
13	3.0	13.1	35.8	48.2	100.0
14	3.6	20.4	32.0	44.1	100.0
Education of Mother					
None	11.6	10.8	39.9	37.7	100.0
1-3	6.2	8.2	33.5	52.1	100.0
4-6	3.9	5.0	26.9	64.2	100.0
7-9	2.4	2.7	15.7	79.2	100.0
10+	2.4	0.7	8.7	88.1	100.0
No. of Siblings					
0-1	2.8	2.6	14.3	80.3	100.0
2-3	4.9	4.5	22.7	67.9	100.0
4-6	6.5	7.8	36.4	49.3	100.0
7+	11.6	13.8	42.9	31.6	100.0

Table 11.2
Educational Status of Children Aged 7–14 Years, According to Selected
Characteristics: Guatemala, 2002

Selected Characteristics	Never Attended	Dropped Out	In Grade Less Than Expected	In Expected Grade or Higher	Total
Total	7.8	9.8	27.8	54.5	100.0
Area of Residence					
Urban	5.0	6.5	20.8	67.8	100.0
Rural	9.5	11.7	31.8	47.0	100.0
Sex					
Male	6.2	8.7	30.4	54.7	100.0
Female	9.7	11.0	24.9	54.4	100.0
Age					
7	12.1	0.9	0.0	87.0	100.0
8	9.8	1.9	20.8	67.5	100.0
9	7.1	2.5	31.9	58.6	100.0
10	6.5	4.5	38.5	50.5	100.0
11	7.1	7.2	38.7	47.0	100.0
12	5.2	18.0	35.5	41.4	100.0
13	7.5	25.1	32.4	35.0	100.0
14	5.5	35.7	30.2	28.6	100.0
Education of Mother					
None	14.1	13.5	38.2	34.2	100.0
Primary	3.9	8.6	24.3	63.3	100.0
Secondary+	0.2	1.8	5.7	92.3	100.0
No. of Siblings					
0-1	2.9	2.8	12.4	81.9	100.0
2-3	4.5	5.7	18.0	71.8	100.0
4-6	9.2	12.6	34.2	44.1	100.0
7+	12.8	14.4	38.6	34.2	100.0

Table 11.3
Educational Status of Children Aged 7–14 Years, According to Selected Characteristics: Honduras, 2001

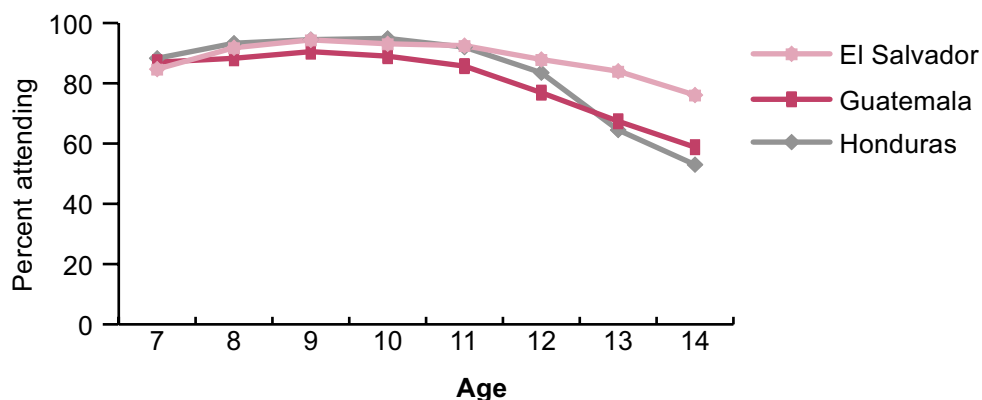
Selected Characteristics	Never Attended	Dropped Out	In Grade Less Than Expected	In Expected Grade or Higher	Total
Total	3.9	10.7	26.1	59.3	100.0
Area of Residence					
Urban	2.6	5.5	19.8	72.1	100.0
Rural	4.8	14.3	30.5	50.5	100.0
Sex					
Male	3.8	11.4	27.9	56.9	100.0
Female	3.9	9.9	24.3	61.9	100.0
Age					
7	10.1	1.6	0.0	88.3	100.0
8	4.7	2.0	19.9	73.4	100.0
9	2.3	3.3	29.2	65.3	100.0
10	2.3	2.7	36.3	58.6	100.0
11	1.6	6.4	34.9	57.1	100.0
12	2.6	13.9	38.7	44.8	100.0
13	2.5	32.9	27.8	36.7	100.0
14	3.5	43.5	28.2	24.8	100.0
Education of Mother					
None	10.1	16.6	39.4	34.0	100.0
1-3	4.8	14.6	34.0	46.6	100.0
4-6	1.6	8.8	21.7	67.9	100.0
7+	0.4	1.9	8.0	89.8	100.0
No. of Siblings					
0-1	1.9	2.2	11.7	84.1	100.0
2-3	2.1	6.6	19.2	72.0	100.0
4-6	4.5	13.8	31.9	49.8	100.0
7+	7.7	18.8	38.7	34.8	100.0

Graphs 11.1 and 11.2 also provide summary information on school attendance in the most recent school year (2001 in Honduras and 2002 in El Salvador and Guatemala). As seen in Graph 11.1 school attendance for children ages 7 thru 11 is very similar in El Salvador and Honduras, but starting with age 12 children in Honduras are more likely to leave school such that by age 13 a smaller proportion of Honduran children are in school than in Guatemala.

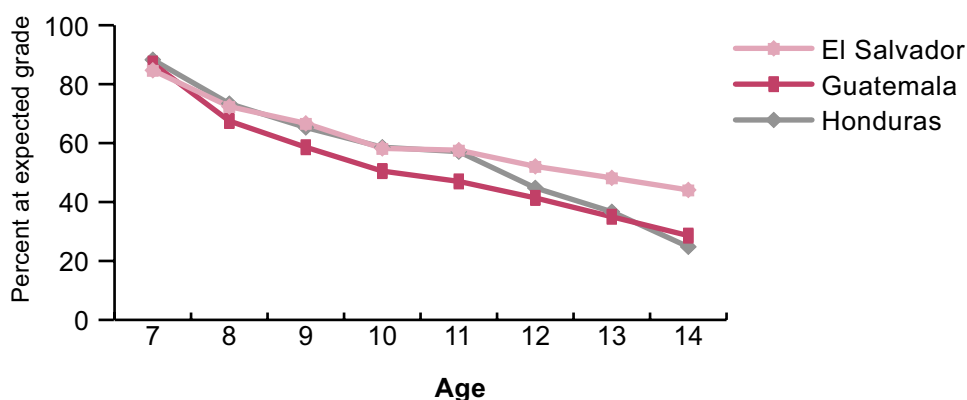
Overall, 61.7 percent of the children aged 7–14 years in El Salvador, 54.5 percent of the children in Guatemala, and 59.3 percent of the children

in Honduras were attending the grade expected or higher, and 38.3, 45.5, and 40.7 percent, respectively, had experienced one or more of three barriers to timely school attainment—late entry, dropping out, or not progressing to successive grades (Tables 11.1, 11.2, and 11.3). The relative importance of these three factors is better appreciated by considering the distribution of the school age population across these categories at different ages. Using El Salvador as an example (Table 11.1), among 7 year-olds, 84.7 percent were attending the expected grade or higher, but this declines considerably to just

Graph 11.1
Percent Attending School by Age at Start of School Year
(Most Recent Survey)



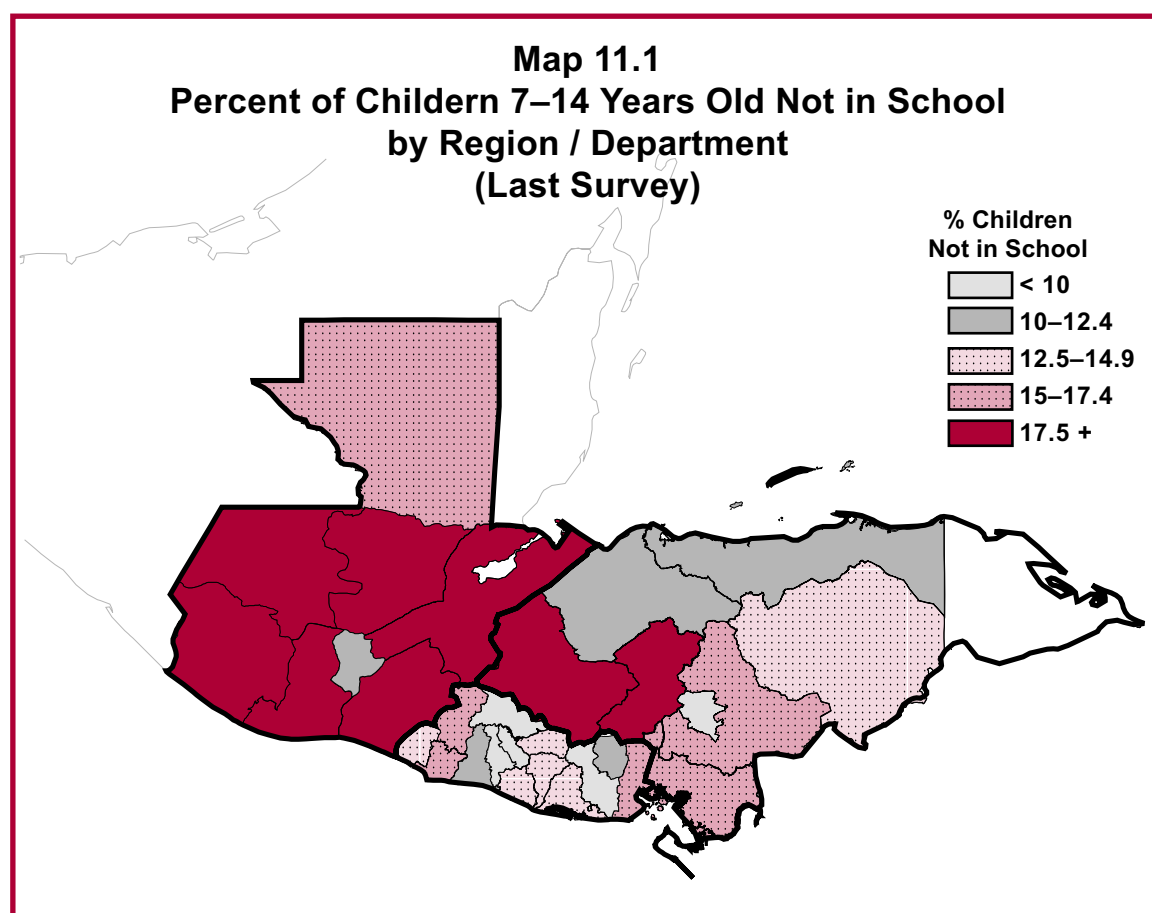
Graph 11.2
Percent Attending Expected Grade or Higher for Their Age,
by Age at Start of School Year
(Most Recent Survey)



44.1 percent of 14 year olds. The corresponding statistics for Guatemala and Honduras are 87.0 and 28.6 percent (Table 11.2), and 88.3 and 24.8 (Table 11.3) percent, respectively.

In El Salvador, school abandonment becomes important above age 11, while in Guatemala and Honduras it becomes important above age 10. Using Honduras as an example (Table 11.3), school abandonment rises quickly from 6.4 percent of 11 year-olds to 43.5 percent of 14 year-olds.

In all three countries, rural children fare worse than urban children on all four categories. With respect to gender, in El Salvador and Honduras, girls seem to fare better than boys, while in Guatemala the opposite appears to be the case. It important to note that children with well-educated mothers and with few siblings are considerably more likely to have attended school, stayed in school, and to have been attending the expected grade level or higher.



Map 11.1 provides sub-national estimates of the percent of children ages 7–14 not attending school and Map 11.2 provides estimates of the percent delayed in grade for age. The problem of children not being in school (either because they never entered or have dropped out) is most pronounced throughout Guatemala and in the western part of Honduras. Children delayed in grade for age (either because they started late or have had to repeat one or more grades) are a more widespread problem throughout the three

countries. Most departments (or regions) have at least 25 percent of children in this age range who are attending a lower grade than expected for their age.

An important factor associated with attending a grade lower than expected for age and the abandonment of school is repetition of grades. As shown in Table 11.4, the percentage of children repeating a grade during the current school year ranged from 13.6 percent in El Salvador to 22.9 percent in Guatemala.

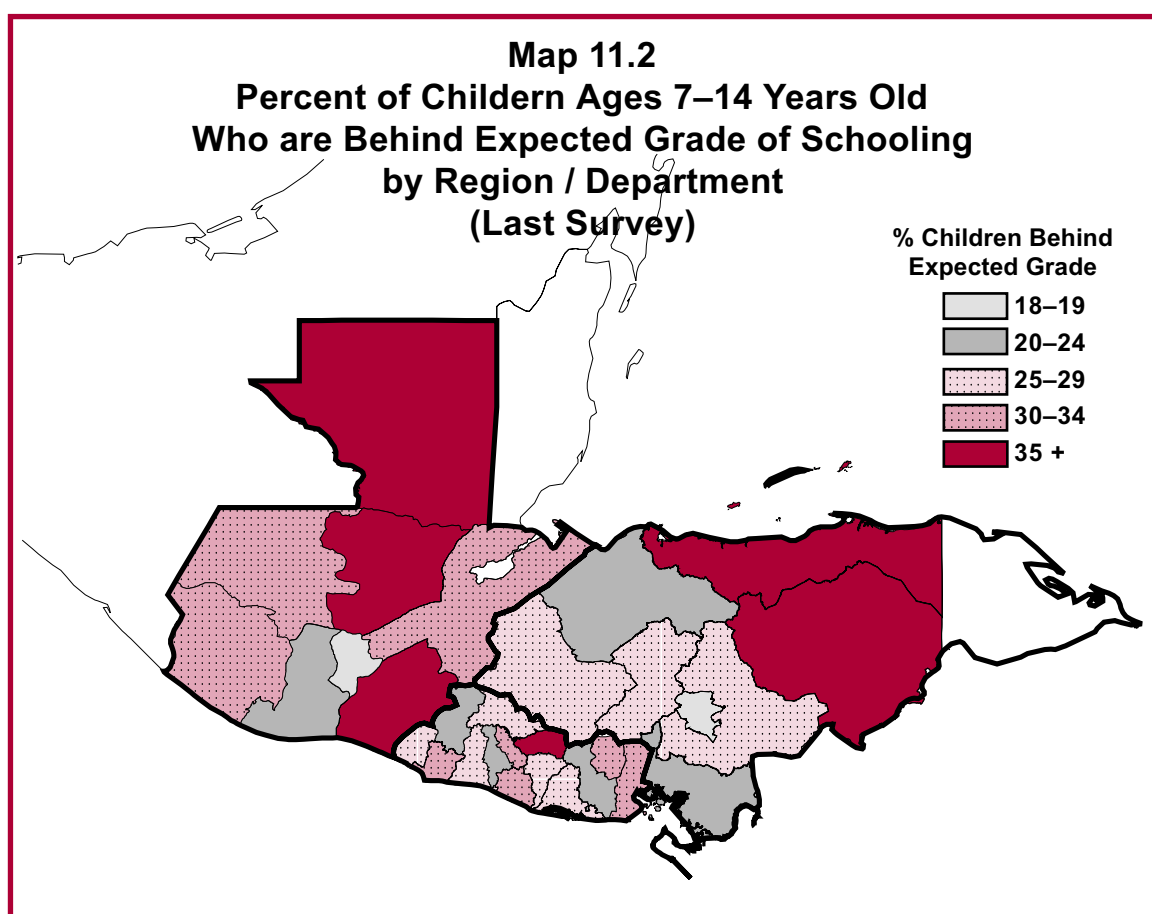


Table 11.4
Percentage of Children Repeating a
Grade During the Year of the Survey,
According to Age at Beginning of
School Year: Children Aged 7–14 Who
Were Attending School
(Most Recent Survey)

	El Salvador	Guatemala	Honduras
Age	2002	2002	2001
Total	13.6	22.9	20.5
7	8.9	23.5	19.5
8	15.0	27.3	23.5
9	15.7	25.0	22.6
10	17.5	25.2	22.9
11	15.4	24.4	19.8
12	13.2	19.4	19.0
13	10.7	15.1	15.0
14	10.3	12.4	14.0

Table 11.5 presents information on reasons given by the mother for children leaving school for children aged 7–14 years who had attended school, but did not attend in the current school year. The three most important reasons in each country were: “Didn’t want to study anymore,” “economic problems,” and “poor grades.” The order of these reasons varied from country to country. Less frequently mentioned reasons in each country included “had to work” and “problems in school.”

Table 11.5 Primary Reasons For Dropping Out of School Children Aged 7–14 Who Have Dropped Out of School		
Country/Reason	Year of Survey	Percentage
El Salvador	2002/03	
Didn’t want to study anymore		32.2
Economic problems		19.7
Poor grades		11.1
Family problems		9.2
Problems in the school		6.2
Had to work		5.3
Guatemala	2002	
Economic problems		29.0
Didn’t want to study anymore		25.7
Poor grades		12.3
Had to work		7.2
Problems in the school		4.7
Honduras	2001	
Economic problems		27.0
Poor grades		15.9
Didn’t want to study anymore		15.0
No higher grades taught		8.4
Problems in the school		6.6
Had to work		5.1

Summary of Findings

- Over 82 percent of all children aged 7–14 years in each country were attending school during the current school year, but only 55 to 62 percent were either at their expected grade level or in one more advanced. The remaining proportions had experienced at least one of the barriers to normal progression within the education system (started late, dropped out, or did not progress through the grades as expected). The percentage of children who were not in school (either had never been or had dropped out) increases in El Salvador from 6.9 percent among children 10 years of age to 24.0 percent among children 14 years of age, from 11.0 to 41.2 percent in Guatemala, and from 5.0 to 47.0 percent in Honduras.
- In general, school abandonment becomes important around 10 to 11 years of age.
- Repetition of grades appears to be an important factor associated with abandoning school.
- Children with better-educated mothers and with fewer siblings are considerably more likely to have attended school, stayed in school, and to have been attending the expected grade level or higher.
- The three most important reasons in each country for abandoning school included “didn’t want to study anymore,” “economic problems,” and “poor grades.”

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